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RHOPALOCERA
AFRICÆ AUSTRALIS.

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RHOPALOCERA AFRICÆ
AUSTRALIS ;

A CATALOGUE
OF
SOUTH AFRICAN BUTTERFLIES:
COMPRISING
DESCRIPTIONS OF ALL THE KNOWN SPECIES,
WITH NOTICES OF
THEIR LARVÆ, PUPÆ, LOCALITIES, HABITS, SEASONS OF
APPEARANCE, AND GEOGRAPHICAL DISTRIBUTION.

BY
ROLAND TRIMEN,
MEMBER OF THE ENTOMOLOGICAL SOCIETY OF LONDON.

~~~~~  
WITH ILLUSTRATIONS BY G. H. FORD.  
~~~~~

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TO

His Excellency Sir George Grey,

K. C. B., D. C. L. OXON, &c.,

GOVERNOR OF THE COLONY OF THE CAPE OF GOOD HOPE,

AND

HER MAJESTY'S HIGH COMMISSIONER,

&c., &c.,

THE STUDENT AND GENEROUS PROMOTER OF THE SCIENCE

OF NATURAL HISTORY,

THIS CONTRIBUTION TO

THE ZOOLOGY OF SOUTH AFRICA,

IS, WITH HIS EXCELLENCY'S PERMISSION,

RESPECTFULLY AND GRATEFULLY

DEDICATED,

8TH AUGUST, 1861.

SYSTEMATIC LIST
OF THE
FAMILIES, GENERA, AND SPECIES
OF
RHOPALOCERA
CONTAINED IN THIS VOLUME.

PAPILIONIDÆ, Leach.

PAPILIO, Linn.

- P. Merope, *Cram.*
- P. Lalandei, *Godt.*
- P. Antheus, *Cram.*
- P. Policenes, *Cram.*
- P. Nireus, *Linn.*
- P. Demoleus, *Linn.*
- P. Zenobius, *Fab.*
- P. Cenea, *Stoll.*
- P. Leonidas, *Fab.*
- P. Pylades, *Fab.*
- †P. Messalina, *Stoll.*
- P. Menestheus, *Drury.*

PIERIDÆ, Duponchel.

PONTIA, Fab.

- P. Alcesta, *Cram. Sp.*

PIERIS, Schrank.

- P. Phileris, *Boisd.*
- P. Chloris, *Fab. Sp.*
- P. Agathina, *Cram. Sp.*
- P. Pigea, *Boisd.*
- P. Charina, *Boisd.*
- *P. Creona, *Cram. Sp.*
- P. Severina, *Cram. Sp.*
- P. Gidica, *Godt.*
- P. Mesentina, *Cram. Sp.*
- P. Zochalia, *Boisd.*
- P. Calypso, *Drury Sp.*
- P. Hellica, *Linn. Sp.*
- P. Eriphia, *Boisd.*
- P. Poppea, *Cram. Sp.*

ANTHOCHARIS, Boisd.

- A. Ione, *Godt. Sp.*
- A. Danaë, *Fab. Sp.*
- A. Eupompe, *Boisd.*

- A. Achine, *Cram. Sp.*

- *A. Antevippe, *Boisd.*

- A. Omphale, *Godt. Sp.*

- *A. Theogone, *Boisd.*

- A. Antigone, *Boisd. M.S.*

- A. Delphine, *Boisd.*

- A. Evanthé, *Boisd.*

- A. Evarne, *Klug—Ehrenb.*

- A. Subfasciata, *Swains. Sp.*

- A. Keiskamma, *D'Urban. M.S.*

- A. Eris, *Klug—Ehrenb. Sp.*

- A. Evenina, *Wlgr. Sp.*

- A. Procne, *Wlgr. Sp.*

- A. Gavisia, *Wlgr. Sp.*

- A. Agoye, *Wlgr. Sp.*

THESTIAS, Boisd.

- T. Annæ, *Wlgr.*

IDMAIS, Boisd.

- I. Calais, *Cram. Sp.*

- I. Vesta, *Boisd.*

ERONIA, Hübn.

- E. Leda, *Boisd. Sp.*

- E. Cleodora, *Hübner.*

- E. Buquetii, *Boisd. Sp.*

- E. Varia, *Trimen.*

CALLIDRYAS, Boisd.

- C. Florella, *Fab. Sp.*

- C. Rhadia, *Boisd.*

COLIAS, Fab.

- *C. Electra, *Linn. Sp.*

- C. Hyale, *Linn. Sp.*

TERIAS, Swains.

- T. Rahel, *Fab. Sp.*

- *T. Pulchella, *Boisd. Sp.*

- T. Desjardinsii, *Boisd. Sp.*

- T. Brigitta, *Cram. Sp.*

DANAIDÆ, E. Doubl.
 EUPLOEA, Fab.
 E. Goudotii, *Boisd.*
 DANAIS, Latreille.
 D. Ochlœa, *Boisd.*
 D. Echeria, *Stoll. Sp.*
 D. Chrysippus, *Linn. Sp.*

ACRÆIDÆ, E. Doubl.
 ACRÆA, Fab.
 A. Horta, *Linn. Sp.*
 A. Dice, *Drury Sp.*
 A. Violarum, *Boisd.*
 A. Nohara, *Boisd.*
 A. Hypatia, *Drury. Sp.*
 A. Zetes, *Linn. Sp.*
 A. Petraea, *Boisd.*
 A. Lycia, *Fab. Sp.*
 A. Ralira, *Boisd.*
 A. Punctatissima, *Boisd.*
 A. Serena, *Fab. Sp.*
 A. Cynthia, *Drury Sp.*
 A. Agauice, *Hewits.*
 A. Protea, *Trimen.*
 A. Amazoula, *Boisd.*

NYMPHALIDÆ, Swains.
 ATELLA, E. Doubl.
 A. Phalanta, *Drury Sp.*
 PYRAMEIS, Hübn.
 P. Cardui, *Linn. Sp.*
 P. Hippomene, *Boisd.*
 JUNONIA, Hübn.
 J. Enone, *Linn. Sp.*
 J. Clelia, *Cram. Sp.*
 J. Octavia, *Cram. Sp.*
 J. Ceryne, *Boisd. Sp.*
 J. Amestris, *Drury Sp.*
 J. Archesia, *Cram. Sp.*
 J. Pelasgis, *Godt. Sp.*
 J. Pelarga, *Fab. Sp.*
 J. Cloantha, *Cram. Sp.*
 J. Hecate, *Trimen.*
 J. Anacardii, *Linn. Sp.*
 J. Orithyia, *Linn. Sp.*

MYSCELIA, E. Doubl.
 M. Natalensis, *Boisd. Sp.*
 NEPTIS, Fab.
 N. Melicerta, *Fab. Sp.*
 ATHYNA, Westw.
 A. Saclava, *Boisd. Sp.*
 DIADEMA, Boisd.
 D. Salmacis, *Drury Sp.*
 D. Anthedon, *Doubl. (E.)*
 D. Bolina, *Linn. Sp.*

EURYPHENE, Boisd.
 E. cœrulea, *Boisd.*
 ATERICA, Boisd.
 A. Meleagris, *Cram. Sp.*
 HARMA, E. Doubl.
 H. Alcimedea, *Godt. Sp.*
 H. Eupithes, *E. Doubl. Sp.*
 MENERIS, E. Doubl.
 M. Tullaghia, *Linn. Sp.*
 NYMPHALIS, Latreille.
 N. Xiphæres, *Cram. Sp.*
 N. Ethalion, *Boisd. Sp.*
 N. Tiridates, *Cram. Sp.*
 N. Brutus, *Cram. Sp.*
 N. Pelias, *Cram. Sp.*
 N. Jahlusa, *Boisd. M.S.*
 N. Zoolina, *Westw.*
 N. Neanthes, *Hewits.*
 PHILOGNOMA, E. Doubl.
 P. Varanes, *Cram. Sp.*

SATYRIDÆ, Swains.
 CYLLO, Boisd.
 C. Leda, *Linn.*
 GNORHODES, E. Doubl.
 G. Parmeno, *E. Doubl.*
 DEBIS, Westw.
 D. dendrophilus, *Trimen.*
 LEPTONEURA, Wlgr.
 L. Clytus, *Linn. Sp.*
 L. Cassus, *Linn. Sp.*
 EREBIA, Dalm.
 E. Hyperbius, *Linn. Sp.*
 E. Narycia, *Wlgr. Sp.*
 E. Hippia, *Cram. Sp.*
 E. Sabacus, *Trimen.*
 E. Cassius, *Godt. Sp.*
 E. Natalii, *Boisd. Sp.*
 E. Panda, *Boisd. Sp.*

YPHTHIMA, Hübn.
 Y. Hebe, *Trimen.*
 †Y. Cymela, *Cram. Sp.*
 MYCALESIS, Hübn.
 M. Evenus, *Hpf.*
 M. Narcissus, *Fab. Sp.*

EURYTELIDÆ, E. Doubl.
 EURYTELA, Boisd.
 E. Hiarbas, *Dru. Sp.*
 E. Dryope, *Cram. Sp.*
 HYPANIS, Boisd.
 H. Ilithyia, *Dru. Sp.*

LYCÆNIDÆ, Leach.
 LOXURA, Horsf.

L. Alcides, *Cram. Sp.*
 L. dermaptera, *Wlgr.*
 MYRINA, Godt.
 M. Pallene, *Wlgr.*
 IOLAUS, Hübn.
 I. Silas, *Westw.*
 I. Sidus, *Trimen.*
 I. Bowkeri, *Trimen.*
 AMBLYPODIA, Horsk.
 A. Natalensis, *E. Doubl.*
 A. Erylus, *Godt. Sp.*
 A. Hirundo, *Wlgr. Sp.*
 A. Leroma, *Wlgr. Sp.*
 SITHON, Hübn.
 S. Batikeli, *Boisd. Sp.*
 LYCENA, Fab.
 L. Emolus, *Godt. Sp.*
 L. Amarah, *Guér.*
 L. Bætica, *Linn. Sp.*
 L. Telicanus, *Herbst. Sp.*
 L. Lingeus, *Cram. Sp.*
 L. Palemon, *Cram. Sp.*
 L. Théophrastus, *Fab.*
 L. Sybaris, *Hpf.*
 L. Hintza, *Trimen.*
 L. Calice, *Hpf.*
 L. Jobates, *Hpf.*
 L. Thespis, *Linn. Sp.*
 L. Celæus, *Cram. Sp.*
 L. Asopus, *Hpf.*
 L. Jesus, *Guér.*
 L. Moriqua, *Wlgr.*
 L. Ladon, *Cram. Sp.*
 L. Cissus, *Godt. Sp.*
 L. Niobe, *Trimen.*
 L. Messapus, *Godt. Sp.*
 L. Knysna, *Trimen.*
 L. Trochilus, *Fric.*
 L. Lysimon, *Hübn. Sp.*
 L. Mahallokoena, *Wlgr.*
 CHRYSOPHANUS, Hübn.
 C. Orus, *Cram. Sp.*
 C. Lara, *Linn. Sp.*
 ZERITIS, Boisd.
 Z. Zenxo, *Linn. Sp.*
 Z. Chrysaor, *Trimen.*
 Z. Pyroeis, *Trimen.*
 Z. Thysbe, *Linn. Sp.*
 Z. Perion, *Cram. Sp.*
 Z. Phosphor, *Trimen.*
 Z. Alphæus, *Cram. Sp.*
 Z. Malagrida, *Wlgr. Sp.*
 Z. Thyra, *Linn. Sp.*
 Z. Pierus, *Cram. Sp.*

Z. Thero, *Linn. Sp.*
 Z. Protunnus, *Linn. Sp.*
 LUCIA, Westw.
 L. Delegorguei, *Boisd. Sp.*
 D'URBANIA, Trimén.
 D. Amakosa, *Trimen.*
 PENTILA, Boisd.
 P. tropicalis, *Boisd. Sp.*
 HESPERIDÆ, Leach.
 PYRGUS, Hübn.
 P. Vindex, *Cram. Sp.*
 P. Asterodia, *Trimen.*
 P. Sataspes, *Trimen.*
 P. Elma, *Trimen.*
 P. Mohozutza, *Wlgr. Sp.*
 CYCLOPIDES, Hübn.
 C. Metis, *Cram. Sp.*
 C. Malgacha, *Boisd. Sp.*
 C. Lepeletieri, *Godt. Sp.*
 C. inornatus, *Trimen.*
 C. Willemi, *Wlgr. Sp.*
 †C. Menes, *Cram. Sp.*
 PAMPHILA, Fab.
 P. Macomo, *Trimen.*
 P. Lepenula, *Wlgr. Sp.*
 P. niveostriga, *Trimen.*
 P. Poutieri, *Boisd. Sp.*
 P. Havei, *Boisd. Sp.*
 P. Letterstedti, *Wlgr. Sp.*
 P. Zeno, *Trimen.*
 †P. Edipus, *Cram. Sp.*
 P. Erinnys, *Trimen.*
 P. Borbonica, *Boisd. Sp.*
 P. Mohopaani, *Wlgr. Sp.*
 P. Moritili, *Wlgr. Sp.*
 LEUCOCHITONEA, Wlgr.
 L. Levubu, *Wlgr.*
 L. bicolor, *Trimen.*
 CAPRONA, Wlgr.
 C. Pillaana, *Wlgr.*
 C. Canopus, *Trimen.*
 NISONIADES, Hübn.
 N. Djalæla, *Wlgr. Sp.*
 N. Kobela, *Trimen.*
 N. Motozi, *Wlgr. Sp.*
 N. Ophion, *Drury, Sp.*
 N. Sabadins, *Boisd. Sp.*
 N. Prodius, *Stoll. Sp.*
 N. Mokeezi, *Wlgr. Sp.*
 ISMENE, SWS.
 I. Ratek, *Boisd. Sp.*
 I. Keithloa, *Wlgr. Sp.*
 I. Florestan, *Cram. Sp.*

E R R A T A .

- Page 6, line 27; *for* "dictinctions" *read* "distinctions."
- „ 7, „ 26; „ "ornamental" „ "ornamented."
- „ 8, „ 4; „ "Omithopteras" "Ornithopteras."
- „ 16, „ 16; *after* "sub-median" *insert* "nervure."
- „ 26, „ 35; *for* "both" *read* "most."
- „ 30, „ 38; *after* "nervule" *insert* "except sub-median. *Hind-wing*: base blackish; a hind-marginal row of dots, one at extremity of each nervule."
- „ 71, „ 5; prefix an asterisk * to "Colias Electra," to denote a doubtful species.
- „ 119, „ 33; *for* "inundations" *read* "indentations."
- „ 132, „ 27; „ "edge" „ "edges."
- „ 173, „ 19; „ "Eribœa" „ "Eribæa."
- „ 302, „ 20; prefix a † to "Pamphila Edipus" to indicate a doubtful native of South Africa.
- „ 303, „ 1; *dele* † prefixed to "Pamphila Erinnys."
- „ 308, „ 33; *for* "Caproni" *read* "Capronæ."
- „ 316, „ 6; „ "are" „ "arc."

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PREFACE.

MY original intention, in the preparation of this work, was simply to have given a list of all the known South African Butterflies, with notes on their habits, localities, &c., only describing the new or previously undescribed species.

On further consideration, however, and with the advice of several friends, I resolved to make original descriptions of all the species, feeling convinced that, by so doing, the utility of the work would be greatly increased; especially to those resident in the South African Colonies, to most of whom the study of Entomology is new, and who have few or no opportunities of reference to arranged collections of insects or entomological works.

For this task I was in some measure prepared by a year's residence in the Cape colony, during which period the greater portion of my time was occupied in the collection and observation of the *Lepidoptera* of the country. On my return to England, I enjoyed, through the kindness of Dr. GRAY, F.R.S., &c., the advantage of continual access to the Entomological Department of the British Museum; obtaining from its splendid collections and valuable works of reference descriptions of the great majority of known South African species.

To render the work of real use to those who have not studied the subject, I felt that, besides an Introduction, it was necessary to give the distinguishing characters of each *Family* and *Genus*, labour that would have been superfluous in a Catalogue intended for Entomologists only. This additional matter, with the equally necessary Glossary, and detailed observations, so much increased the size of the work that I resolved to publish it in two parts. In the present volume the first five of the Families of South African Butterflies are included, comprising rather more than half the number of known species.*

Doubtful species, i.e., those that are probably only *varieties* of other species are marked thus *: and species *whose occurrence in Africa South of the Tropic is uncertain*, thus †

The classification followed is that given in the "Genera of Diurnal Lepidoptera" by Doubleday and Westwood, the most complete and reliable of modern works on the subject, and one whose careful investigation of the characters of genera is well known and appreciated. I have not thought it essential constantly to refer to this magnificent work in the list of synonymes of each species, but have only done so in the case of those Butterflies that are figured on its plates, or that I have placed under different genera.

Under the head of "RHOPALOCERA," some aid in the determination of the *Family* to which a particular Butterfly belongs may be obtained from the Table of Families there given.

Immediately succeeding the structural characters presented by each Family and Genus, a few general remarks are added, relative to the predominant colouring, habits, &c., of the insects comprised in that group, in order to aid the student in the determination of the position of any species he may capture.

Under the name of each species will be found, as far as I have been able to ascertain, the following information: first, its *synonymy*, with references to the various works in which it is figured or described, arranged chronologically as far as could be determined; second, its *breadth* (inches and lines) *across the expanded wings*, showing the greatest and least expanse known of each species; third, its *description*, comprising a few words in *italics*, briefly descriptive of its general colouring, followed by a detailed description of the upper and under surface of both fore and hind-wings,—as well as notices of the differences presented by the ♀ or any known varieties of the species; fourth, *descriptions of the caterpillar and chrysalis*; fifth, the favourite *haunts* of the insect, such as mountains, woods, or marshes; sixth, the usual *months of its appearance* in the perfect state; seventh, observations on its *habits*, flight, distribution, &c.; and eighth, a list of its known *localities*, South African and throughout the world, with mention of the *collections* in which specimens from such localities are known to me to exist.*

The absence of figures of the principal genera and new species is much to be regretted; but the difficulties and cost of their preparation have induced me to defer any attempt at illustrations for the present. I propose, however, to issue a

* These constant references to collections are abbreviated. Thus, "*Coll. miki*," means my own collection; "*Coll. S. A. Mus.*," the collection of the South African Museum; "*Coll. Brit. Mus.*," that of the British Museum; &c.

limited number of coloured plates with the second volume of this work, and shall be glad to hear from those subscribers and others who may be willing to give their support to this most desirable aim.

Those who are really desirous of studying the subject may, however, congratulate themselves on the want of coloured figures,—as the application necessary to determine a species from descriptions only will teach them far more of an insect than if they had merely to refer to a plate to discover its name.

It is hoped that the *outline plate of structure* given, which has been etched by W. TASKER SMITH, Esq., from a drawing of my own, will be found sufficiently explanatory of the technical terms used in the descriptions.

I gladly take this opportunity of thanking the following friends, for whose kind assistance I am greatly indebted :

ADAM WHITE, Esq., F. L. S., &c., of the Zoological Department of the British Museum, for most valuable assistance and advice throughout my work of description.

W. S. M. D'URBAN, Esq., lately resident at King William's Town, for numerous notes and observations on the haunts and habits of Kaffrarian Butterflies, and for many specimens of new and rare species. Mr. D'Urban's observations are most interesting and important, and are constantly quoted throughout the volume.

Miss WENTWORTH, of Knysna, Cape Colony, for several collections of Lepidoptera, with copious and useful notes on the habits and seasons of appearance of many species.

EDGAR L. LAYARD, Esq., F. Z. S., &c., Curator of the South African Museum, for numerous specimens of South African Butterflies, much interesting information as to localities, &c., the privilege of continual reference to his entomological library and that of the Museum under his charge, and for advice and assistance in every way.

CHARLES AKEN FAIRBRIDGE, Esq., of Rondebosch, near Cape Town, for numerous specimens, and valuable notes on the habits and larvæ of Cape Lepidoptera.

R. C. JONES, Esq., of D'Urban, Port Natal, for a beautiful series of the Butterflies found in his neighbourhood.

Miss REX and JACOB REX, Esq., of Knysna, for specimens of the rarer Lepidoptera of that part of the Cape Colony, and many useful hints as to habits and localities of the various species.

C. J. ANDERSSON, Esq., the distinguished traveller and author, for specimens of, and information concerning, the Rhopalocera of Damaraland.

My thanks are due to W. C. HEWITSON, Esq., of Oatlands, Walton-on-Thames, for the kindness with which he permitted me to carefully inspect his magnificent collection of the Butterflies of the whole World.

I must also express my grateful sense of the courtesy shown me by F. MASKEW, Esq., Librarian of the Cape Town Public Library, in affording me free access to all entomological works in the valuable collection in his keeping.

To LUDWIG PAPPE, M. D., the Colonial Botanist, I am likewise indebted for opportunity of reference to divers old and rare books on Entomology, and also for the correct nomenclature of several species of South African plants.

The following gentlemen, residing in Southern Africa, have materially aided me in the publication of this work, by kindly using their influence to procure subscriptions to the same in their several neighbourhoods: A. G. ATHERSTONE, Esq., M. D., Graham's Town; G. W. BROWNING, Esq., Res. Mag., &c., Simon's Town; J. FICHAT, Esq., Civil Commis., Knysna; G. GREY, Esq., M. D., Cradock; W. S. M. D'URBAN, Esq., and Rev. H. KITTON, M. A., King William's Town; L. TAATS, Esq., Swellendam.

I am well aware of the many imperfections of this Catalogue; and, in offering it to the public, would remind naturalists and those critically disposed, how impossible it is, in so little worked a field as that of South African Entomology, to avoid much that is faulty or extremely doubtful, and how very limited is our knowledge of the lower animals inhabiting this country. My earnest and diligent endeavour has been to bring together all the South African species of Butterflies, carefully to describe them, and to add all information that I could gather concerning them, whether from the observations of others, from entomological works, or from my personal experience. As the first step towards a more complete knowledge of a long-neglected branch of South African Zoology, I trust that this contribution to Entomology will not be valueless; and that it may induce and aid many among us to commence the collection and study of those exquisite forms of beauty and symmetry,—the “Butterflies of South Africa.”

ROLAND TRIMEN.

Cape Town,
9th August, 1861.

INTRODUCTION.

THE *Order* LEPIDOPTERA of Linnæus comprises the insects commonly known as Butterflies and Moths. Both Butterflies and Moths are at once distinguished from other insects by their wings being covered with scales. This character gave rise to the name of the Order, the word Lepidoptera being derived from the Greek *λεπιδ*, a scale, and *πτερον*, a wing. No Lepidopteron ever has the wings entirely without scales, but in both divisions of the Order species occur with the greater portion of the wings denuded and transparent. Some anomalous females among the Moths are entirely wingless, and others have rudimentary wings too small to enable them to fly. Lepidoptera, in common with several other insects, after their exclusion from the *Ova* or Eggs, pass through three distinct states of existence. They are disclosed as *Larvæ* or Caterpillars; when full grown they assume the form of *Pupæ*, or Chrysalides; and thence emerge in the *Imago* or perfect state. Though these three states are mentioned as distinct conditions of existence, it must not be imagined that the animal is suddenly metamorphosed from one to the other. The development throughout is very gradual from the Embryo to the Imago, well-defined though the three assumed forms be. This will at once be perceived in a brief outline of the insect's life. The little Larva, when disclosed from the Ovum deposited by its parent, contains within itself the embryo form of the Perfect Insect. It immediately commences to eat the leaves or other portions of a plant, and increases in size as rapidly as it devours. This growth soon necessitates, as in many other of the lower classes of animals, a change of skin. The Larva ceases to eat for a short period; the skin fades in colour, wrinkles, and finally splits on the back, and through the crack emerges the Caterpillar, in a new skin, a stage nearer perfection. As soon as the new covering has hardened, the Larva recommences to feed, and continues to do so till the skin again becomes too small to contain its occupant, and has to be rejected as before. This process is undergone

from three to six times, before the Larva attains its full growth ; and frequently, after a moult, the insect is so altered in colour and marking as to be scarcely recognised. When at length full grown, the next moult of the Caterpillar reveals the *Pupa*. In this condition the insect is so far advanced towards perfection that the position of all the limbs, as developed in the Imago, is more or less distinctly visible. All, however, is soft and immature ; but, during the period of perfect rest and quiescence that now ensues, the various organs require solidity and symmetry, and finally colour, and for the last time the broken skin gives egress to the insect, now fully formed, and in the active enjoyment of all its faculties. In this perfect and matured condition, the following structure is observable in a LEPIDOPTEROUS INSECT. The body consists, as in other insects, of a series of connected rings or annulations. These are divided into three unequal parts, viz. : the *Head*, consisting of a single segment ; the *Thorax*, composed of three closely-soldered segments ; the *Abdomen*, comprising the remaining nine, which are usually more easily distinguished than those composing the thorax, and more or less extensible or retractile. These three distinct portions are united very closely by short, slender ligaments. The *Head* has two large, globose, compound eyes, immoveable, composed of numerous minute hexagonal lenses, and situate one on either side of the head ; and also, in some instances, two *ocelli* or simple eyes* on the summit ; a pair of jointed horns or *antennæ* springing from the front of the head, between the eyes, very variable in length and structure ; a pair of jointed organs called *palpi*, springing from the *labium* or under lip (which is very minute) ; and a long tubular *haustellum* or proboscis, for extracting the juices of flowers, which is composed of two separate pieces, answering to the *maxille* or lower jaws of many other divisions of insects, and, when at rest, is coiled between the palpi. (This organ is occasionally rudimentary or altogether absent.) The *Thorax*, being the seat of the organs of locomotion, is the strongest and most compact portion of the insect. The three segments of which it is composed are named respectively the *pro-thorax*, *meso-thorax*, and *meta-thorax*. The first of these bears the first pair of legs ; † the second, the second pair of legs and the first pair of wings ; the third, the third pair of legs and the two hind-wings. On

* Sometimes termed *stemmata*.

† The prothorax also bears a pair of small, horny, scale-like organs, clothed with hair, immediately behind the head, which are termed *patagia* or tippets, and appear to be moveable at the will of the insect.

the meso-thorax, at its hinder extremity, is observable a small triangular portion called the *scutellum*, with its apex directed forwards. The *Wings*, which are inserted in the upper part of the sides of the thorax, are *always four* in number; and are composed of a double, thin, transparent membrane, enclosing, and supported and extended by, numerous rigid, horny *nervures*. They are clothed with overlapping scales, planted by their bases in the membrane of the wing; and these give to the insects their exceeding beauty of colour. At the base of the forewings, *fixed to the meso-thorax*, are two scale-like appendages, clothed with hairs or scales similarly to the rest of the thorax, known as *tegulæ*, *pterygodes*, or *wing-covers*. The *Legs* are fixed to the *sternum* or lower portion of the thorax, and are (as in all true Insects) *six* in number, a pair on each segment. They are composed of five distinct portions; the *coxa*, *trochanter*, *femur*, *tibia*, and *tarsus*. The *coxa* is the basal joint united to the sternum; the *trochanter*, a minute piece joining the coxa to the *femur*, or thigh, which is usually the thickest part of the limb; the *tibia*, or shank, is more slender than the thigh, and possesses one or two spines at its tip, and occasionally one at its centre; the *tarsus*, or foot, is five-jointed, and terminated by two small hooks. The *Abdomen* is the seat of the intestines and generative organs; and consists of nine more or less retractile segments; it is commonly sub-cylindrical, smoothly pilose, and occasionally tufted at its extremity.

The *LARVÆ* of *Lepidoptera* are elongate, commonly cylindrical or sub-cylindrical, and composed of thirteen segments or annulations, including the head. The whole insect, with the exception of the head and legs, is of a soft structure, and flexible in the highest degree. The nature of their covering varies considerably: some are smooth and entirely devoid of any cutaneous appendages; others are dotted with tubercles from which spring stiff bristles or bunches of hair; some are densely and universally hairy; others with simple or branched, sharp, rigid spines. The *Head* is divided into two lobes by an impressed line or slight channel running vertically; it is hard, sometimes smooth and polished, sometimes granulated. The eyes are not compound as in the Perfect Insects, but consist of a few simple, hard tubercles, similar to the ocelli of the Imago, and are arranged in two small circles on the side of the head. The antennæ are small and inconspicuous, inserted just within the eyes, and composed of three or four joints. The mouth is furnished with a pair of strong, horny, toothed jaws or *mandibles*, immediately below

the *labrum* or upper lip; a lower pair of jaws, of a softer nature than the mandibles, termed *maxillæ*, which are furnished with a small jointed organ springing from their external edge called a *maxillary palpus*; and a *labium*, or under lip, also provided with a pair of palpi known as *labial palpi*. (At the tip of the lower lip is a conical, perforated, cylindrical organ, which is the *spinneret* for the emission of the silk secreted in two internal tubes.) With these effective organs of manducation, these Larvæ consume their food with wonderful celerity. The three segments of the body next the head each bear a pair of jointed, hard, cylindrical legs, hooked at the tip, which answer to the six legs of the Imago. It may readily be imagined that, in insects living on plants, and having constantly to shift their position to obtain fresh food, were the remaining nine segments entirely without legs, it would be exceedingly difficult for the Larvæ to support so bulky and cumbersome a portion of their body, on the slender twigs and leaves to which they are constantly clinging. Accordingly, we find a greater or less number of these segments provided with supports in the shape of fleshy, wide legs, which are more or less retractile, and fringed at their extremity with numerous small hooked bristles. These are known as *false* or *pro-legs*, and, in a Lepidopterous Larva with its full complement, amount to five pairs, thus placed, making the head the first segment: a pair on the seventh, eighth, ninth, and tenth segments, and a pair on the thirteenth or last segment. Some Larvæ of Lepidoptera have only four prolegs—a pair on the *tenth* and a pair on the *last* segment. It is very rarely that the hindmost pair are wanting, and when this is the case the pair on the tenth segment are always present, to support the hinder portion of the body. Whatever may be the number of these false legs (which are finally parted with on the assumption of the Pupa state), they are not known to pass the limits described above; the *fifth*, *sixth*, *eleventh*, and *twelfth* segments are never provided with legs. On the sides, above the legs, are observable a row of minute punctures, often circled with a bright, contrasting colour to that portion of the skin immediately around them. These are the *spiracles* or breathing-pores, which are the mouths of air-tubes connected with the two large *tracheæ* running along the sides of the body. All Lepidopterous Larvæ are provided with silk, but only a portion of them spin *cocoons* previous to entering on the Pupa state. Some of the latter mix earth, fragments of wood, portions of leaves, &c., with the silk; while some, like the well-known silk-worm of commerce, use silk alone in the construction of their pupa-cases.

Lepidopterous Larvæ, in common with those of most other Orders of Insects, are subject to the attacks of parasites, the principal of which are certain HYMENOPTERA, known as *Ichneumonidæ*, or Ichneumon Flies. The eggs of these little destroyers are introduced into the body of the caterpillar, by the long and sharp ovipositor of the parent fly, which displays the greatest energy and perseverance in searching after the particular kind of Larva upon which her young are destined to feed. The grubs of the ichneumon, as soon as hatched, immediately commence devouring the body of the caterpillar, but, led by a wondrous instinct, avoid doing injury to the important vital organs; so that the Lepidopterous larva generally continues to live till it has attained its full size, and often assumes the Chrysalis state before the ichneumons cause its death. The latter sometimes eat their way through the sides of the Larva, forming their little *cocoons* around it, and sometimes undergo their metamorphosis within its body, only emerging when in their perfect state. A large number of species of these parasites are known to science; indeed, it is probable that every Caterpillar has its own peculiar kind of Ichneumon Fly. The importance of the services of these Hymenoptera, in keeping within due bounds the numbers of Lepidopterous Insects, and consequently of their plant-destroying Larvæ, is incalculable, and far exceeds the aggregate services of birds, bats, spiders, wasps, predaceous beetles, and other foes. Several species of DIPTERA, or Two-winged Flies, also find their sustenance as larvæ in the bodies of living Caterpillars; and, in some instances, the single parasite, when fully grown, is almost as large as the Larva it has devoured.

The PUPÆ, or CHRYSALIDES, of Lepidoptera present a very different appearance from that of the Larvæ. Instead of an active, incessantly-devouring insect, provided with numerous and efficient instruments for eating and progression, we behold a motionless, helpless, mummy-like animal, incapable of taking nourishment, or of self-defence. The position of the limbs of the Lepidopteron about to be developed is generally distinctly visible. They are so arranged as to occupy the smallest possible space; the antennæ, haustellum, and legs being closely appressed to the breast; and the wings as closely fitting to the sides, one above the other, the tips of the front margins just meeting below the breast. The eyes are usually very apparent; and the spiracles are present, though often differing in number and position from those of the larvæ. When first disclosed, the Chrysalis is soft and moist, and frequently of a different colour to that

which it subsequently assumes, when its skin is hardened. Of those Pupæ not enclosed in cocoons, some are found in leaves united by the larva, others buried in the ground, or lying under stones or the bark of trees, and a large number, including most of the Chrysalides of Butterflies, are simply suspended by the tail to plants, copings of walls, &c.

The Lepidoptera, of whose structure and life a brief general account has been above given, are very universally distributed over the world, even the Arctic regions having a few peculiar species. From their elegance, and exceeding beauty of colour and intricacy of marking, they early attracted the attention of naturalists; but little or nothing was done as regards their classification till the rise of the great Linné. He grouped the ORDER into three great *Genera*: *Papilio*, containing the Butterflies; *Sphinx*, the Hawkmoths; and *Phalæna*, the Moths *par excellence*. Even in his time, the number of known Lepidoptera were but ill accommodated in so limited a scope of classification; and since then, the vast increase of species, consisting of novelties from all parts of the world, and including peculiar forms of the highest interest, necessitated as rapid a creation of fresh Genera and Families for their reception. Latreille's subsequent establishment of the groups *Diurna*, *Crepuscularia*, and *Nocturna*, analogous to Linné's three genera—though followed by many authors—being only founded on the general time of flight of the Butterflies, &c., and not on structural distinctions, could not long satisfy naturalists. The division, originally proposed by M. Dumeril, of the Lepidoptera into groups depending on the *structure of the antennæ*, is now very generally followed. The Butterflies are contained in the first of these divisions, and are termed RHOPALOCERA (*ροπαλον*, a *club*, *κερας*, a *horn*), from their antennæ being thickened into a club or knob at the tip. The whole of the Moths are comprised in the section HETEROCCERA (*ετερος*, *different*, *κερας*, a *horn*), from their antennæ being of various shapes, but never clubbed. M. Dumeril, however, divided the Moths into three main structural groups; but these are all included in the one section Heterocera, being replaced by the several sub-divisions of *Sphingina*, *Bombycina*, &c.

It is my object, in the present work, to give descriptions of all the species of the first of these groups, known to inhabit South Africa; that is, of all the *Butterflies* yet discovered in Africa, South of the Tropic of Capricorn.

RHOPALOCERA.

PAPILIO, *Linn.*

PAPILIO and HESPERIA, *Fab.*

PAPILIONES, *Hübner.*

DIURNA, *Latr.*

ROPALOCERA, *Dum.*

RHOPALOCERA, *Boisd.*

ACHALINOPTERA, *Blanch.*

IMAGO.—*Antennæ* more or less clubbed or thickened at the tip; *haustellum* always well-developed. *Thorax* ovate, pilose. *Wings* variable in outline: *forewings* more or less approaching a triangular, *hindwings* a circular, form. *Legs* rather slender; *femora* often densely hairy, *tibiæ* spined. *Abdomen* more or less elongate, occasionally sub-ovate, usually flattened laterally.

LARVA.—Smooth, hairy, or spiny; *pro-legs* ten.

PUPA.—Cylindrical, or angulated, tapering to the tail: when angulated, the *head* has one or two pointed projections. Suspended by the tail; often with an additional suspensory band of silk about the middle of the body.

BUTTERFLIES, the insects briefly characterised above, are, taken as a group, the most splendid of all the annulose tribes. They are easily distinguished from their near allies the Moths, not only by the marked structural character of knobbed antennæ, but also from the fact of their wings being as exquisitely ornamental on their *under* surface as on their upper. Indeed, it is frequently the case that the underside is far more brilliantly and distinctly coloured and marked than the upper surface; while, in the Moths, the underside is usually very dull, and with but a faint shadow, as it were, of some of the principal upperside markings. In connection with this peculiarity, it is worthy of note that Butterflies, with very few exceptions, always, in repose, close the wings by causing them to meet vertically above their back, leaving thus the whole of the *under* surface exposed; while Moths, on the contrary, rest with the wings closed in a directly opposite manner, keeping them deflected at a greater or less angle with the body, so that the *upper* side is visible. Butterflies are solely diurnal in their flight; Moths are chiefly nocturnal, but a large number are diurnal, and some fly both by day and night.

The *Rhopalocera*, though but a limited group when compared with the *Heterocera*, are yet a tolerably numerous division,—about 3,500 species being known to Science. Every shade of colour, every variety of exquisite and intricate

marking, is to be found among these beautiful insects. In size, they vary from some of the tiny "Blues" (*Lycœnæ*), scarcely more than half an inch across the expanded wings, to the great *Omithopteras* of the Indian Archipelago, and the splendid *Morphidæ* of Brazil, some of which attain an expanse of from six to nine inches. It is in the tropical regions that Butterflies, in common with most other classes of animals, attain to their highest development of size and colouring, and harmonise with the splendid birds and gorgeous flowers of the lands that enjoy an endless summer.

South Africa is not very abundantly supplied with Butterflies, but it produces a considerable number of species peculiar to itself, and many of them of remarkable beauty. The South-Eastern portion appears to be far richer in *Rhopalocera* than the rest of the country, especially the Natal region, where many species formerly held to be peculiar to the Tropics are found in abundance. It is a remarkable fact, too, that these tropical forms found at Natal, in 30° S. latitude, are mostly identical with those inhabiting Sierra Leone, in 8° 30' N. latitude, more than 2,500 miles distant.

In our remarks upon the South African Butterflies, however, it must be borne in mind how very few spots have been searched, and how partially those few have been investigated, by collectors of insects. Travellers have picked up a chance specimen or two here and there as they journeyed; but, with the exception of Cape Town and its immediate vicinity, the neighbourhood of Port Natal, and the Knysna district (which latter I collected in for nine months), I know of no localities that have been "worked" for their Entomological treasures.* We may then, I think, safely conclude that a large number of species yet remain to be discovered in the deep kloofs, the ancient forests, and the lofty mountains of Southern Africa. The "Karoo," too, offers a hitherto untried field for the Lepidopterist; and though I do not imagine any large number of Butterflies inhabit that barren region, I have no doubt that there are species peculiar to so remarkable a tract of country.

The South African RHOPALOCERA, as at present known, are contained in the ten following families, viz.: *Papilionidæ*, *Pieridæ*, *Danaidæ*, *Acræidæ*, *Nymphalidæ*, *Satyridæ*, *Eurytelidæ*, *Erycinidæ*, *Lycœnidæ*, and *Hesperiidæ*. Representa-

* Since these remarks were written, British Kaffraria (particularly the vicinity of King William's Town) has yielded a rich harvest of Entomological treasures to the exertions of my friend W. S. M. D'Urban, Esq., an energetic and careful naturalist.

tives of the five remaining Families of Butterflies, viz., *Ageronidæ*, *Heliconidæ*, *Morphidæ*, *Brassolidæ*, and *Libytheidæ*, are not known to have occurred in South Africa. The ten families, in the order given above, will be found characterised in the body of the work : but, for the purpose of the readier determination of the *Family* to which any South African Butterfly may belong, I have endeavoured to arrange the Families in a tabular form as follows :

A. Antennæ inserted close together.

B. Both sexes with six perfect legs fitted for walking.

C. Palpi very short.

Fam. 1. Papilionidæ.

CC. Palpi of moderate length, or rather elongate.

D. Discoidal cell of hind wing closed by discocellular nervules.

Fam. 2. Pieridæ.

DD. Discoidal cell of hindwing open.

Fam. 9. Lycænidæ.

BB. Both sexes with the first pair of legs imperfect and useless for walking.

E. Nervures of forewing much swollen at the base.

F. Palpi of moderate size, usually very hairy.

Fam. 6. Satyridæ.

FF. Palpi long, very sparingly clothed with hairs.

Fam. 7. Eurytelidæ.

EE. Nervures of forewing not swollen at the base.

G. Hindwings deeply grooved on inner margin, so as to embrace the under side of the abdomen.

Fam. 5. Nymphalidæ.

GG. Hindwings not grooved.

H. With gradually clavate antennæ.

Fam 3. Danaidæ.

HH. With abruptly clavate antennæ.

Fam. 4. Acræidæ.

BBB. Male with the first pair of legs imperfect, female with all the legs perfect.

Fam. 8. Erycinidæ.

AA. Antennæ inserted widely apart.

Fam. 10. **Hesperiidæ**.*

There are also many general distinctions in colour, &c., between the divers *Families*; but these are very liable to numerous exceptions. Thus, the typical forms of the PAPILIONIDÆ have the hindwing prolonged into a tail, (Ex., *Papilio Merope*, Cram.), but there are very many without this appendage (Ex. *Papilio Cenea*, Stoll.) In the PIERIDÆ, the wings are very generally yellow or white in ground-colour, but in *Pieris Eriphia*, Godt., black appears to predominate. The SATYRIDÆ are in general remarkable for possessing ocellated spots on one or both surfaces of the wings, but in *Gnophodes Parmeno*, E. Doubl., these ornaments are wholly wanting. The varied and spotted character of the wings of the ACRÆIDÆ is entirely lost in the aberrant *Acraea Amazoula*, Bois., which is of an unicolorous ochre-yellow, with black nervures. The exceeding variability of such distinctions as these renders it impossible to depend upon them; and it is always safer, where possible, to use structural ones, in characterising groups.

FAMILY I.—**PAPILIONIDÆ**.

PAPILIONIDÆ, *Leach*.

PAPILIONIDES, *Boisd*.

PAPILIONES, *Horsf*.

PAPILIONINÆ, *Swains*.

PAPILIONIDI, *Steph*.

IMAGO.—*Head* of moderate size; *eyes* prominent; *antennæ* more or less arched, gradually thickening into an elongate club; *palpi* short, moderately hairy. *Thorax* rather elongate, moderately robust. *Fore-wings* elongate, decidedly triangular in form; the *discoïdal cell* closed; and the *lower discoïdal nervule* so situate as to appear like a fourth median nervule. *Hind-wings* rounded, dentate: the *first median nervule* often produced beyond hind-margin to support a more or less elongate projection of the wing, commonly called a *tail*; the *inner margin* concave, leaving the abdomen free. *Legs* rather long, slender, all six fitted for walking. *Abdomen* elongate, rather slender.

LARVA.—Robust, smooth, brightly coloured, with ten

* It must, of course, be remembered, that in most Families some Genera will occur forming an exception to the arbitrarily chosen characters of an artificial arrangement like the above; but, as a rule, the characters given will be found to hold good.

pro-legs. Segment next head with a forked or Y-shaped, peculiarly-scented, retractile organ, protruded when the animal is alarmed or irritated.

PUPA.—Angulated, head bifid; suspended by the tail, and by a silken band fastened to the body.

This very extensive Family—367 species are enumerated in Mr. George Gray's British Museum Catalogue of Papilionidæ—is very widely distributed throughout the greater part of the world, and contains some of the largest and most splendid Butterflies known. It is, however, but poorly represented in South Africa, only eleven species being as yet known to inhabit the country. All these, however, are large and handsome insects, their flight is irregular but powerful, and nearly all are dwellers in woods. They are comprised in a single genus, namely, the

Genus PAPILIO.

Papilio, Linn, &c.

The characters given of the Family *Papilionidæ* sufficiently define this Genus. The colours of the South African species are principally various shades of yellow and green, strikingly contrasted with dark-brown or black. The most widely distributed species, and the one most likely to be first captured by the collector, is the fine *P. Demoleus*, which, from its having occurred in widely-distant and very different localities, I imagine to be common throughout the colony.

1. *Papilio Merope*.

Papilio Merope, Cram., *Pap. Exot.*, pl. 151, f. A, B; and pl. 378, f. D, E.

Papilio Brutus, Fab., *Ent. Syst.*, III, 1, p. 22, n. 65.

„ „ *Herbst, Nat. Bek. Ins.—Schmett.*, pl. 46, f. 1, 2.

Laertiades Brutus, Hübn., *Verz. Bek. Schmett.*, p. 84.

Papilio Brutus, Godt., *Ene. Meth.*, IX, p. 69, n. 122.

„ „ *Don., Nat. Repos.* III. p. 77.

„ „ *Boisd., Faune Ent. de Mad. &c.*, p. 12.

„ „ „ *Spec. Gen. Lep.*, I, p. 221, n. 39.

„ „ *Westw., Arc., Ent.*, I, p. 147.

„ „ *Boisd., App. Voy. de Deleg.*, p. 585.

„ „ *Chenu, Enc. d'Hist. Nat., Pap.*, pl. 2, f. 1.

Papilio Merope, G. R. Gray, *Cat. Lep. Brit. Mus.*, I. p. 25.

Expands 3 in. 2 lin.—4 in. 3 lin.

Tailed on hind-wings. Pale straw-yellow, with broad, brownish-black marginal markings. Fore-wing: Costa black-edged, widely so before middle, a broad black band on hind-

margin, slightly scalloped on inner edge, and containing an ovate spot of the pale ground colour near apex. *Hind-wing*: a series of more or less connected, black, quadrate blotches across wing beyond middle, the largest blotch, before anal angle, containing a small yellow spot close to inner margin; a row of more or less connected black lunules along hind-margin, in some specimens edging one or both sides of tail on 1st median nervule; tail itself rather elongate and spatula-shaped. *UNDER-SIDE*.—*Fore-wing*: Similar in marking to upper-side, but the marginal bands brownish-ochreous, except at base of costa and inner edge of hind-marginal band, both of which are dull black, the latter widening to anal angle. *Hind-wing*: Warm ochreous, with a brownish tinge, much paler near base; longitudinal ferruginous-brown streaks between nervures; three such longitudinal streaks in discoidal cell; transverse band of blotches, and hindmarginal lunules, as on upperside, but ferruginous-brown instead of black.

Woods and copses; sometimes in gardens, or settling on flowers growing in open ground near woods.

October (b)—March (m). June, 1861 (D'Urban).

Has a rapid irregular flight and often settles on flowers. They appear to fly in a circular direction several times over the same ground; for I repeatedly saw, and once recaptured, a peculiarly-torn specimen, in the same spot, during an hour spent in one of the woods near Knysna, in pursuit of this very handsome species. In the woods at Plettenberg Bay, the flowers of *Plumbago Capensis* were its chief resort. Common.

Knysna. Plettenberg Bay.—Coll. mihi.

D'Urban, Natal (R. C. Jones).

Natal.—Coll. S. A. Mus.

King William's Town, British Kaffraria.—Coll. W. S. M. D'Urban.

Natal. Sierra Leone. Madagascar.—Coll. Brit. Mus.

"Senegal. Mozambique." Boisd.

2. *Papilio Lalandei*.

Papilio Lalandei, *Godt., Enc. Meth.*, IX, *Suppl.* p. 811,
[n. 121, 2.

" " *Boisd., Spec. Gen. Lep.*, I. p. 326.

" " " *App. to Voy. de Deleg.*, p. 585.

" " *Westw., Arc. Ent.*, I, pl. 37, f. 1, 2.

" " *G. R. Gray, Cat. Lep. Brit. Mus.*, I, p. 20.

Papilio Delalandii, *Chenu, Enc. d'Hist. Nat., Pap.*, pl. 7, f. 2.

Expands 3 in. 8 lin. (according to Westwood's figure).

Hind-wings tailed. "Wings black, with a median transverse band of pale yellow-ochre branching into two on fore-wing; of these branches the inner one is the broadest, and of rather a greenish-grey; this band having, on *hind-wing*, six very

acute denticulations on its outer edge, and terminating at anal angle, near a red spot surmounted by an arch of blue dots; hind-margin of fore-wing divided throughout its length by nine yellow spots; a lunule of the same colour upon each denticulation of hind-wing, also a spot at extremity of tail, which is rather long and spatula-shaped. UNDER-SIDE paler than upper-side, except on outer side of yellow band and along hind-margin. Body black above, brown beneath, with the breast and palpi yellow."—Boisd., *Sp. Gen. Lep.*

"*Caffraria*.—In the Muséum National." Mr. Westwood states (*Arc. Ent.*, I. 151) that the specimen his figures were copied from is in the collection of M. Boisduval. He represents no red and blue spot on hind-wing.

3. *Papilio Antheus*.

Papilio Antheus, *Cram.*, *Pap. Exot.*, pl. 234, f. B, C.

" " *Herbst. and Jabl., Nat. Bek. Ins.*, *Schmett.* [III, pl. 48, f. 3, 4.

" " *Fab., Ent. Syst.*, III, 1, p. 36, n. 105.

Iphiclides Antheus, *Hübner, Verz. Bek. Schmett.*, p. 82.

Papilio Antharis, *Godt., Enc. Meth.*, IX, p. 52, n. 78.

Papilio Agapenor, *Boisd., Sp. Gen. Lep.*, I, p. 255, n. 79.

Papilio Antheus, *Westw., Arc. Ent.*, I, p. 150.

" " *G. R. Gray, Cat. Lep. Brit. Mus.*, I, [p. 32, n. 149.

Expands 3 in. 6 lin.—4 in. 2 lin.

Hind-wings tailed. *Brown-black, with pale-greenish stripes and spots.* *Fore-wing*. base striped with green, which is continued to a little before anal angle of *hind-wing*; four stripes across wing—the first common to *both* wings and reaching to near anal angle of *hind-wing*, the other three only crossing discoidal cell, considerably waved; just beyond cell commences a row of spots gradually widening to inner-margin, inclining inwardly, and continued across *hind-wing* to near anal angle (where it meets the first stripe from costa of fore-wing); beyond commencement of macular row, on costa, a quadrate spot; close to, and parallel to, hind-margin, a row of nine rounded spots. *Hind-wing*: two crimson, rather elongate, transverse spots at anal angle; a row of six lunulate spots along hind-margin, continuous of those in fore-wing; beyond the three spots next anal angle are three greyish lunules: tail long, slightly curved outwardly, white-margined internally and white-tipped. UNDER-SIDE.—Ochreous brown; markings paler, similar to upper side, mostly edged with dark-brown. *Fore-wing*: inner-marginal portion dark-brown; a row of dark-brown spots

immediately before the hind-marginal row of greenish ones; and a row of similar spots on hind-margin at ends of nervules. *Hind-wing*: two black, superiorly crimson-edged spots on costa, between the two transverse stripes; crimson spots at anal angle rather paler than above. Sides of abdomen *transversely* banded with black; tinged with crimson at base.

“Bay of Port Natal.”—Boisd., App. to Voy. de Deleg., p. 586.

West Africa. Sierra Leone.—Coll. Brit. Mus.

4. *Papilio Policenes*.

Papilio Policenes, Cram., *Pap. Exot.*, pl. 37, f. A, B.

Papilio Pompilius, Herbst. and Jabl., *Ins.*—Schmett., III, [pl. 49, f. 5, 6.

Papilio Agapenor, Fab., *Ent. Syst.*, III, 1, p. 26, n. 76.

Iphiclides Pompilius, Hübner, *Verz. Bek. Schmett.*, p. 82.

Papilio Polixenus, Godt., *Enc. Meth.*, IX, p. 52, n. 77.

Papilio Policenes, Boisd., *Sp. Gen. Lep.*, I, p. 261, n. 84.

Papilio Agapenor, Westw., *Arc. Ent.*, I, p. 149.

Papilio Policenes, G. R. Gray, *Cat. Lep. Brit. Mus.*, p. 32, [n. 150.

Smaller than *P. Antheus*, to which it is closely allied. Hind-wings tailed.

Expands 3 in.—3 in. 5 lin.

Dark-brown, with pale-green stripes and spots. Bases of wings green; a stripe of the same colour from costa of fore-wing near base to a crimson spot at anal angle of hind-wing. *Fore-wing*: three transverse stripes from costa to median nervure; beyond these, two spots on costa, the outer one of the two connected with an irregular row of somewhat quadrate spots from costa near apex to near middle of inner-margin (this row is continued across *hind wing* to anal angle); a row of eight spots along hind-margin. *Hind-wing*: a row of from four to six thin lunules along hind-margin; tail long, narrow, black, tipped with whitish. *UNDER-SIDE*.—Similar in pattern, but *much paler* than upper-side. *Hind-wing*: a brown band, outwardly-margined with an irregular edging of seven elongate, crimson markings, from costa before middle to anal angle; on hind-margin, near anal angle, three black, blue-powdered lunules, one above, two below, the tail. Abdomen *longitudinally* striped with black.

Natal.—In Coll. S. A. Mus.

Natal. West Africa. Sierra Leone. Ashanti.—Coll. Brit. [Mus.

small golden spot at anal angle, and a larger crescent of the same colour before it above submedian nervure, close to inner-margin. Fringes very narrow, whitish between nervules.

♀. *Black duller and more sooty than in ♂, stripes and spots dull pale-greenish, hardly metallic. Fore-wing:* upper spot of the three united ones on costa barely indicated by a few green scales; stripe narrower, its edges straighter than in ♂. *Hindwing:* stripe much narrower, never extending further than extremity of cell, and sometimes not so far; hind-marginal spots larger, more lunular than in ♂, increasing greatly towards anal angle; white marks on fringes larger, conspicuous. UNDER-SIDE.—*Fore-wing:* immediately beyond cell a pale, shining, greyish space, running into a similarly-coloured transverse stripe commencing just before apex, and reaching submedian just before anal angle; between nervules, from subcostal nervure to submedian, on hind-margin, a row of silvery-whitish spots. *Hind-wing:* ferruginous tint at base conspicuous; a shining transverse fascia about middle, conspicuously whitish near costa, gradually becoming obsolete to inner-margin; beyond middle a silvery-whitish streak from costa to third median nervule; wing beyond it pale greyish, except on hind-marginal edge, which is dark brown, and contains some silvery lunular spots.*

Woods and copses. Frequent in gardens near woods.

September (e)—March (e). April and June, 1861 (D'Urban).

Very common. A very powerful and rapid flier, soaring over the highest forest trees; but, like most species of the Genus, a frequent settler on flowers. At Plettenberg Bay, *Plumbago Capensis* appeared very attractive to this splendid Butterfly; in gardens, the flowers of the Orange and Periwinkle seem to be its favourites. It is very active and wary; and when settled keeps its wings in a state of ceaseless vibration.

Knysna. Plettenberg Bay. Natal (Aldrich).—Coll. mihi.
 "Graham's Town. King William's Town."—D'Urban, in
 [litt.

Natal.—Coll. S. A. Mus.

D'Urban, Natal (R. C. Jones).

Natal. West Africa. Sierra Leone.—Brit. Mus.

"Madagascar?"—Boisd.

* It is worthy of remark, that the nearly-allied Mauritian species, *P. Phorbanta*, Linn., which differs greatly from *P. Nireus* in the shape and disposition of the bluish-green markings on the upper-side, presents an *under-side almost identical* with that of *Nireus*, as much in the female as in the male. It is quite possible, if not probable, that *P. Phorbanta* may prove to be only a strongly-marked *insular variety* of the widely-spread and variable *P. Nireus* of the main land of Africa.

6. Papilio Demoleus.

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| Papilio Demoleus, | <i>Linn., Syst. Nat.</i> , II, p. 753, n. 46. |
| „ „ „ | <i>Mus. Lud. Utr. Reg.</i> , p. 214,
[n. 33.] |
| „ „ | <i>Fab., Syst. Ent.</i> , p. 455, n. 53. |
| „ „ | <i>Wulf., Capens. Insect.</i> , p. 29, n. 28. |
| „ „ | <i>Cram., Pap. Exot.</i> , pl. 231, f. A. B. |
| „ „ | <i>Herbst. & Jabl., Nat. Bek. Ins.</i> —
[<i>Schmett.</i> , III, pl. 36, f. 3, 4. |
| „ „ | <i>Fab., Ent. Syst.</i> , III, l. p. 34, n. 101. |
| Orpheides Demoleus, | <i>Hüb., Verz. Bek. Schmett.</i> , p. 86. |
| „ „ „ | <i>Samml. Exot. Schmett.</i> , Band
[I, (figured).] |
| Papilio Demoleus, | <i>Godt., Enc. Meth.</i> , IX, p. 43, n. 52. |
| „ „ | <i>Boisd., Sp. Gen. Lep.</i> , I, p. 237, n. 60. |
| „ „ | „ <i>Voy. de Deleg.</i> , p. 585. |
| „ „ | <i>Chenu, Enc. d'Hist. Nat.</i> — <i>Pap.</i> pl. 8,
[f. 1.] |
| „ „ | <i>G. R. Gray, Cat. Lep. Brit. Mus.</i> , I,
[p. 21, n. 91.] |

Expands 3 in. 3 lin. —4 in. 3 lin.

Black, with pale sulphur-yellow stripes and spots. Fore-wing: a yellow streak from base just above sub-costal nervure; basal portion, to some distance, thickly streaked with thin yellowish transverse lines, and irrorated with yellowish scales; in outer portion of discoidal cell two good-sized spots, the lower one farther from base than upper, a transverse yellow streak touching the closing nervule; above the latter, outside cell, a short longitudinal streak; beyond this, a sub-quadrate spot on costa commences a transverse row of ten irregular-shaped spots, the first three curving outwards towards hindmargin, the remainder inclining inwardly, increasing in size to about middle of inner-margin; two rows of spots along hind-margin, the inner row of nine spots commencing with an elongate outwardly-curving mark on costa, the outer row, on hind-marginal edge, consisting of eight lunular spots. *Hind-wing*: a little before middle, a transverse stripe continuous of the median row of spots in fore-wing, narrowing to beyond middle of inner-margin, and divided into six by the crossing nervures; on costa, touching outer edge of stripe, an ovate, reddish, blue-scaled spot in a black ring; on inner-margin, just before anal angle and almost touching stripe, a black inwardly densely blue-scaled spot, bounded outwardly by a dark-red crescent; two rows of hind-marginal spots as in fore-wing, but larger and more

lunular, the inner row of seven, (of which the first and seventh touch the costal and inner-marginal ocelli respectively), the outer of six spots; all the black portion of wing, as far as inner row of marginal spots, thickly irrorated with yellow dots; denticulation on first median nervule on hind-margin more produced than the rest, indicating the generic inclination to a *tail*. **UNDER-SIDE.**—Considerably paler than upper-side. *Fore-wing*: spots as on upper-side; yellow streak above sub-costal nervure extends to beyond middle; four yellow streaks radiating from base in cell, and two below cell; no irrorations. *Hind-wing*: base widely yellowish, divided into three curved transverse stripes by the black-clouded nervules; stripe before middle as on upper-side; ocelli similar; within discoidal cell, at extremity, a dull-golden, inwardly bluish-scaled crescent, edging a semicircular black marking; inner row of hind-marginal spots (which are larger than on upper-side) closely paralleled on their inner-side by a row of five sub-lunular marks, coloured like the crescent in cell, and, like it, bounding each a blackish mark; the dark space between cell and these latter markings, is thickly irrorated with dull-golden scales.

LARVA.—*Pale yellowish green, marbled with purple or purplish-grey* running in irregular sub-transverse markings on the sides. Numerous pale-ferruginous, small, ocellate spots sprinkled about purple markings. A broad, longitudinal, white stripe above spiracles. Head and legs pale sandy-brown; as well as two small pointed tubercles on segment next head, from between which is protruded, when the animal is irritated, a crimson, Y-shaped, tentacle-like organ, emitting a very peculiar, pungent odour. Two similar smaller tubercles on anal segment (but no Y-shaped organ). A very sluggish Larva, and as variable in the distribution of its colours as the Butterfly is constant in its pattern. The young Caterpillar differs strikingly from the full-grown one, being very dark, without green colouring, and clothed with short spines. Feeds on *Umbelliferae*, *Bubon galbanum* and *gummiferum*, and in gardens on the Fennel. Also on Orange and Lemon trees.

PUPA.—*Dark ash-grey or brownish-grey*, varied with darker shades and streaks. Rather elongate; the bifid head and thoracic elevation very prominent. Commonly attached to the older stems of its food plants, which it closely resembles in colour.

Open ground, hillsides, fields, and gardens. Rarely in open spots near edges of woods.

September (e)—March (e). August—May (D'Urban).

This fine Butterfly is a very common species; it flies strongly, but does not attain the elevation that *P. Nireus* and *Merope* commonly do. The attractive *Plumbago* lured *Demoleus* into the kloof-woods at Plettenberg Bay, when I was collecting there in February, 1859; but it is a rare visitor in woods generally.

P. Demoleus strikingly resembles an Indian species, *P. Erithonius*, Cram., but appears to be distinct from it.

Cape Town. Knysna. Plettenberg Bay.—Coll. mihi.

Colesberg (Coll. D. Arnot).

Cape.—Coll. S. A. Mus.

D'Urban, Natal (R. C. Jones).

Natal, Sierra Leone, Ashanti.—Coll. Brit. Mus.

"Madagascar (Ste. Marie)."—Boisd.

"Port Elizabeth. Graham's Town. King William's Town (very abundant)."—W. S. M. D'Urban, in litt.

Butterworth, Kaffraria (J. H. Bowker).

7. *Papilio Zenobius*.

Papilio Zenobius, *Fab., Ent. Syst.*, III, 1, p. 37, n. 108.

" " *Godt., Enc. Meth.*, IX, p. 74, n. 140.

Papilio Zenobia, *Don., Nat. Repos.*, V, pl. 179.

Papilio Zenobius, *Boisd., Sp. Gen. Lep.*, I, p. 369, n. 213.

" " " *Voy. de Deleg.*, p. 586.

" " *Chenu, Enc. d'Hist. Nat.—Pap.*, pl. 2,
[f. 2.]

Papilio Zenobia, *G. R. Gray, Cat. Lep. Brit. Mus.*, I,
[p. 70, n. 317.]

Expands 4 in.—4 in. 1 lin.

Brown-black, with creamy-white bands and spots. Fore-wing: immediately beyond cell commences a rather broad transverse stripe reaching to a little beyond middle of inner-margin, acutely dentate on outer edge, on inner edge very acutely dentate in ♂, only slightly so in ♀; on hind-margin six spots between nervules. *Hind-wing*: median stripe of fore-wing continued by an externally denticulate, internally almost straight-edged, band to middle of inner-margin; on hind-margin, a row of seven yellowish spots between nervules, so deeply intersecting the margin as to give the impression of a chequered hind-marginal band. *UNDER-SIDE*.—*Dull brown*; pale markings similar to upper-side. *Fore-wing*: apex tinged with ochreous, black streaks between nervules from hind-margin. *Hind-wing*: basal portion ochreous, with longitudinal black streaks between nervules; three such streaks in discoidal cell; nervules beyond white stripe darker than ground colour, between them long black streaks reaching from band to hind-marginal spots.

"Country of the Amazulus."—Boisd, (App. to Voy. de Deleg).

West Africa. Ashanti.—Coll. Brit. Mus.

8. *Papilio Cenea*.

Papilio Cenea, *Stoll, Suppl. Cram.*, pl. 29, f. 1.

Danaïs Rechila, *Godt., Enc. Meth.*, IX, p. 183, n. 24.

♀. *Papilio Trophonius*, *Westw., Arc. Ent.*, I, pl. 39, f. 1, 2.

Papilio Cenea, *G. R. Gray, Cat. Lep. Brit. Mus.*, p. 70, [n. 322.

Expands 3 in. 8 lin.—4 in. 3 lin.

♂. *Sooty-black, with yellow-ochreous spots. Forewing*: in discoidal cell, near its extremity, an oblique, outwardly pointing, elongate, narrow marking; beyond cell, from costa, a transverse curved row of four spots, the lower one, between second and third median nervules, large, elongate-ovate; an ovate, yellowish-white spot at apex; two or three pale ochreous spots on hind-margin, between first median nervule and sub-median nervure. *Hind-wing*: a very broad, ochreous, transverse band, its inner edge not far from base, its outer edge—which is convex and slightly crenelated—scarcely extending beyond middle; near hind-margin a row of twelve rather small spots arranged in pairs between nervules,—some of which spots are often obliterated. *UNDER-SIDE*.—Pale spots similarly arranged. *Fore-wing*: apical portion of wing broadly coloured with *ochreous-brown*, narrowing towards anal angle; all the spots, except the largest, white. *Hind-wing*: ground-colour the same ochreous-brown as apex of fore-wing; three brown, longitudinal streaks in discoidal cell; spots along hind-margin white, in pairs, constantly fourteen in number. Fringes very narrow, white in the scalloped spaces between nervules; most observable in hind-wing.

♀. *Differs greatly from ♂. Fore-wing*: oblique mark in discoidal cell larger, pure white; beyond cell all the spots white; a large, sub-ovate, *conspicuous white patch* takes the place of the two central spots of the four that form a curved row in ♂; the large fourth spot as it were extended into a *large, pale brick-red semicircle*, the base of which occupies all but the outer tip of inner-margin, and the upper edge entrenches on a portion of discoidal cell. *Hind-wing*: all of the same brick-red tint, except a broad black band on hind-margin, which contains from eleven to fourteen white spots (some of which are red-tinged) arranged in pairs. *UNDER-SIDE*: similar to upper-side, though slightly paler. Apex of *fore-wing* and hind-marginal band of *hind-wing* of the same ochreous-brown as in ♂.

Woods. Frequently visits gardens in the neighbourhood of woods.
December (m)—March (m).

This handsome Butterfly is a remarkable instance of the manner in which species of one group often imitate those of another, far-remote and quite different in structure. In colours and arrangement of marking, the ♂ so nearly resembles another South African Butterfly, *Danaüs Echeria*, Stoll, that when I first took the insect at Knysna, I thought it a very large specimen of the latter, until I saw the six legs and general structure of *Papilio*. Curiously, also, the ♀ *Cenea* bears considerable resemblance to another South African *Danaüs*—*D. Chrysippus*, Linn. It is not so rapid a flier as *P. Nirens* or *P. Merope*; and is, in general, not difficult to capture. A small white, labiate flower, growing in open spots in the woods, is much frequented by this species. Like many other species, the female is much more rarely seen than the male. I only saw two female specimens, one at Knysna, and the other at Plettenberg Bay.

Knysna. Plettenberg Bay.—Coll. mihi.

Natal.—Coll. Brit. Mus.

9. *Papilio Leonidas*.

Papilio similis, Cram., *Pap. Exot.*, pl. 9, f. B, C.

„ „ *Herbst. and Jabl., Nat. Bek. Ins.—Schmett.*
[VI, pl. 124, f. 1, 2.

Papilio Leonidas, Fab., *Ent. Syst.*, III, 1, p. 35, n. 103.

Arisbe similis, Hübn, *Verz. Bek. Schmett.*, p. 89.

Papilio Leonidas, Godt., *Enc. Meth.*, IX, p. 44, n. 56.

„ „ *Boisd., Sp. Gen. Lep.*, I, p. 242.

„ „ *Westw., Arc. Ent.*, I, p. 149.

„ „ (var. ♂) *G. R. Gray, Cat. Lep. Brit.*
(*Mus.*, I, pl. 5, f. 3.

Expands 3 in. 4 lin.—3 in. 10 lin.

Blackish-brown, with greenish-white spots. Fore-wing: three or four spots in discoidal cell, viz., two or three forming an oblique, transverse, outwardly-inclining short row about middle of cell, and one at extremity close to sub-costal nervure: beyond cell, and near apex, three elongate spots forming an outward tending transverse row; this row is apparently continued inwardly by three other spots, viz.: a small one between second discoidal and first median nervules (frequently obsolete), a large ovate one between first and second median nervules, and a moderate-sized elongate one between third median nervule and sub-median nervure; a row of six or seven small rounded spots along hind-margin. *Hind-wing:* a broad greenish-white space on basal portion, divided into five by the nervures, base itself dark-brown; along hind-margin a row of five small rounded spots; between this row and the basal patch sometimes from one to three similar spots (when more than one, arranged parallel to the outer row). *UNDERSIDE.*—White markings as on upper-side, but rather duller in tint,

base of both wings dull-red. Fore-wing: inner-marginal half of wing dark brown, costa narrowly, apex very broadly coloured with ochreous-brown. *Hind-wing:* ground-colour all ochreous-brown; a black mark at base containing two white dots; broad whitish space tinged with yellowish, its edges not so defined as on upper-side; hind-marginal spots seven in number: a white dot on inner-margin, a little beyond large whitish space.

The South African examples of this species are smaller and duller in colour than those from Tropical West Africa. They are comprised in Mr. G. R. Gray's "Variety *a*."

Natal.—Coll. mihi; and Coll. S. A. Mus.

Natal. West Africa. Sierra Leone. Ashanti.—Brit. Mus.

10. *Papilio Pylades*.

Papilio Pylades, *Fab., Ent. Syst.*, III, 1, p. 34, n. 100.

Zelima Pylades, *Fab., Syst. Gloss.* (Illig. Mag. vol. VI),

Papilio Pylades, *Godt., Enc. Meth.*, IX, p. 43, n. 54.

" " *Don., Nat. Repos.*, I, pl. 13.

" " *Boisd., Sp. Gen. Lep.*, I, p. 244, n. 69.

" " *Westw., Arc. Ent.*, I, p. 149.

" " *G. R. Gray, Cat. Lep. Brit. Mus.*, 1,
[p. 7, n. 23.]

Var. *Papilio Morania*, *Angas's Kaf. Illustr.*, pl. 30, f. 1.

" " *G. R. Gray, Cat. Lep. Brit. Mus.*,
[I, p. 8, n. 24.]

Expands 2 in. 8 lin.—3 in. 2 lin.

Brownish-black; with white markings slightly tinged with greenish. Fore-wing: three spots in discoidal cell, the innermost one smallest, rounded, the second elongate, somewhat kidney-shaped, the outer one at extremity of cell, large, semicircular in form; immediately beyond cell, from one to three small rounded spots in a transverse line from costa; beyond these, from costa very near apex, an irregular transverse row of nine spots, the fifth of which, between second discoidal and first median nervules, is rather large, elongate, and the three last, between second median nervule and inner-margin, are so enlarged as to form a great white space on inner-margin bounded by median nervure, and a broad dark band on hind-margin near anal angle; a row of eight or nine small rounded spots along hind-margin. *Hind-wing:* white to extremity of discoidal cell; a broad dark band on hind-margin, containing two rows of spots, the inner row of four small rounded spots, the outer of six lunular ones; on inner-margin at inner edge of dark band, a dull chrome-yellow spot; base and inner-margin grey. UNDER-SIDE.—

White markings similar; costa and apex of fore-wing and hind-margin of hind-wing ochre-yellow. *Fore-wing*: base dull soft red to nearly middle of discoidal cell, the colour gradually disappearing along subcostal nervure to extremity of cell. *Hind-wing*: base of the same red as in fore-wing, gradually fading into an ochreous band running between median and submedian nervures as far as yellow spot; inner edge of yellow hind-marginal band blackish, containing, between discoidal and third median nervules, three elongate yellowish-white spots within the inner row of marginal spots; spots of outer row edged with blackish; fringe white between nervules.

In the West African specimens in the British Museum, two of the spots in discoidal cell of forewing are united to the large white space below median nervure; but this difference is surely not sufficiently important to warrant the separation of the South African specimens as a distinct species from *Pylades*. A careful examination of the specimens in the British Museum thoroughly convinced me of the identity of species in examples from various parts of Africa.

Natal.—Coll. mihi and S. A. Mus.

Natal. West Africa. Sierra Leone. Congo.—Brit. Mus.

† 11. *Papilio Messalina*.

Papilio Messalina, Stoll, *Suppl. Cram. Pap. Exot.*, pl. 26,
[f. 2, 2 b.

Westw., Arc. Ent., I, p. 151.

Expands 4 in.

Black; with a broad, creamy, yellowish-white, transverse band common to both wings. *Fore-wing*: near apex, immediately above first discoidal nervule, an elongate-ovate creamy-white spot; the transverse band commences below this spot, beyond middle, on second discoidal nervule, extending to middle of inner-margin, its external edge considerably indented on nervules by the ground-colour; fringe white, black-spotted in indentations of margin. *Hind-wing*: transverse band broader than in *fore-wing*, and nearer to base, radiating on black outwardly; fringe as in *fore-wing*. **UNDER-SIDE**.—*Bronzed-brown*; transverse band whiter than on upper-side, in hind-wing much narrower. *Fore-wing*: five longitudinal black streaks in discoidal cell; apical white spot as on upper-side; transverse band not so sharply dentate outwardly; from hind-margin, between each two nervules, a broad, longitudinal black streak as far as white band—the streak between apical spot and commencement of band reaching to extremity of cell; fringe varied white and brown. *Hind-wing*: basal portion reddish-ochreous, containing two black spots between costal and subcostal nervures; four

black, longitudinal streaks in discoidal cell, and a black spot between median and submedian nervures; transverse band much narrowed (particularly the portion near inner-margin), radiating irregularly on discoidal nervules; broad, longitudinal, black streaks from hind-margin to transverse band, as in forewing; fringe varied with brown and white.

The above description has been made from Stoll's figure of *Papilio Messalina*, in default of actual specimens of the insect. It is on Stoll's authority that I include the species as South African. Mr. Westwood gives *P. Cynorta*, of Boisduval (not the *Cynorta* of Fabricius) as a synonym of this species; and states that specimens of *P. Messalina* are in both the British and Bristol Museums, from Sierra Leone. Owing to no South African specimen existing in the collection of the British Museum, I overlooked this species when in England; and only discovered it on a re-examination of Stoll's work, a fine copy of which is in the Public Library at Cape Town. The latter author mentions the species as among those brought by Le Vaillant from *Caffraria*.

FAMILY 2.—PIERIDÆ.

PIERIDÆ, *Dup.*

PIERIDES, *Boisd.*

PIERINÆ and COLIANÆ, *Swains.*

PIERIDI (sub-fam. of PAPILIONIDÆ), *Steph.*

IMAGO.—*Head* rather small; *eyes* prominent; *antennæ* never very long, commonly rather slender, and with an abrupt flattened club, but in some Genera short, thickening gradually to the tip, which is somewhat truncate; *palpi* hairy, sometimes rather long, always projecting beyond head. *Thorax* rather short, stout, clothed with silky hairs. *Fore-wing* more or less pointed at apex; costa slightly arched; hind-margin nearly straight or slightly convex; inner-margin straight or very slightly emarginate; discoidal cell closed, the upper discoidal nervule generally united to subcostal nervure. *Hind-wing* rounded at apex; costa very little arched; hind-margin very convex, very slightly scalloped, or entire; *inner-margins* convex, covering more or less of basal portion of abdomen; discoidal cell closed. *Legs* rather short, slender, all six fitted for walking. *Abdomen* slender, long, much flattened laterally.

LARVA.—Rather slender, more or less clothed with short hairs, tapering a little to each extremity.

PUPA.—Much angulated, slender, head with a single projecting point; attached by the tail and a central silken band, as in the *Papilionidæ*.

The species of this Family are usually remarkable for the light ground-colour of their wings, varying from pure white

to deep yellow and orange. They are very pretty, graceful Butterflies, with a tolerably swift, irregular flight. They seldom rise to any height, and settle very frequently on flowers. There is generally a considerable difference in colour or marking between the male and female in this Family, and in some species it is very remarkable. The habits of the species of this division are often gregarious or pseudo-gregarious, as considerable numbers of one kind are often found about some favourite spot, or attractive flowers; and little clusters of some species of "Whites" may frequently be seen congregated on the damp mud at the margin of pools or brooks. Eight of the numerous Genera are known to be represented in South Africa—viz.: *Pontia*, *Pieris*, *Anthocharis*, *Idmais*, *Eronia*, *Callidryas*, *Colias*, and *Terias*, comprising forty-one species. *Pieris* and *Anthocharis* are the best represented in South Africa, the former being known to contain thirteen, the latter fourteen, Species. *Pontia* may be known by its very delicate structure, elongate wings, and semi-transparent whiteness; *Pieris* by its greenish or yellowish-white colour, with black spots and margins; and *Anthocharis* by the bright patch of violet, crimson, red, or orange, at the tips of the fore-wings. *Colias* and *Terias* are both noticeable for lighter or darker shades of yellow, with black borders to the wings, but the latter is far more fragile in structure than the former.

Genus PONTIA.

Pontia, *Fab.*, &c.

Pieris, *Godt.*

Leucophasia, *Boisd.*

IMAGO.—*Head* rather small; *eyes* large, prominent; *palpi* short, hairy, only slightly projecting beyond forehead; *antennæ* moderately long, slender, with an elongate, laterally-compressed club. *Thorax* small, short, very narrow. *Wings* large, broad. *Fore-wings* with costa much arched; apex rounded; hind-margin convex, entire; anal angle scarcely rounded; inner-margin almost straight; discoidal cell closed, terminating beyond middle. *Hind-wings* much rounded; costa straighter than in fore-wings; hind-margin and inner-margin more convex, discoidal cell closed, terminating about middle. *Legs* of moderate length, slender. *Abdomen* elongate, very slender, much flattened on the sides, not reaching anal angle of hind-wings.

A single species is found in South Africa. It is one of the most elegant and fragile of Butterflies.

12. Pontia Alcesta.

Papilio Alcesta, *Cram., Pap. Exot.*, pl. 379, f. A.

Papilio Narica, *Fab., Ent. Syst.*, III, 1, p. 187, n. 378.¹

Pieris Narica, *Gott., Enc. Meth.*, IX, p. 163, n. 149.

Pontia Narica, *Boisd., Sp. Gen. Lep.*, I, p. 433, n. 3.

” ” ” *Voy. de Deleg.*, p. 586.

Pontia Alcesta, *Doubl., West. Hewits., Gen. Diurn. Lep.*,
[pl. 5, f. 5.

Var ? *Leucophasia sylvicola*, *Boisd., Faune de Mad.*, p. 20.

Expands 1 in. 3 lin.—2 in. 2 lin.

White. Fore-wing: apex faintly edged with blackish in ♂, more widely bordered in ♀; in most specimens a round, faint-blackish spot, near hind-margin, on first and second median nervules. *Hind-wing* spotless. UNDER-SIDE.—

White. Fore-wing: dusky, thin, greenish-grey hatchings at base, along costa, and at apex. *Hind-wing*: universally hatched with slightly fainter marks than those in fore-wing; generally three ill-defined greyish striæ across the wing.

M. Boisduval says, in his “Faune Entomologique de Madagascar, &c.” p. 20, that his *Sylvicola* may “possibly be only a variety of *Narica*.” Specimens in the South African Museum, taken by Mr. E. L. Layard in Madagascar, confirm this theory; and I have no doubt of their being specimens of *Alcesta*.

“Natal.—In woods of Mimosa.”—Boisd. (*Voy. de Deleg.*).
Senegal. Sierra Leone. Fernando Po. Congo.—Coll. Brit.
[Mus.

Madagascar.—Coll. S. A. Mus. (var. *Sylvicola*, Boisd.)

Genus PIERIS.

Pieris, *Schr., Boisd., &c.*

Pontia, *Fab.*

IMAGO.—*Head* of moderate size; *eyes* smooth; *palpi* rather long, scaly, hairy beneath; *antennæ* long, slender, with a rather abrupt, laterally-compressed club. *Thorax* moderately robust, hairy. *Fore-wings* with costa arched near base, and thence almost straight to apex (in both species); apex more or less pointed (very much so in *P. Gidica* ♂); hind-margin straight, or slightly concave about its central position, entire; inner-margin slightly concave. *Hind-wings* sub ovate; hind-margin very convex, entire; inner-margins covering fully half of under-side of abdomen. *Legs* of moderate length and thickness. *Abdomen* rather long and slender, thickened at the end.

There is a curious tendency to yellow colouring in many of the South African “*Whites*.” This is chiefly manifested

in the females, as in *P. Gidica*, *Mesentina*, *Severina*, &c. ; and in *P. Zochalia* the hind-wings only of the ♀ are frequently bright creamy-yellow instead of white, which gives the insect a very peculiar appearance. Seven of the thirteen South African species of *Pieris* are also found in tropical West Africa ; two in Madagascar ; and two in India ; while five appear to be exclusively found in Southern Africa. I have noticed that the forest-haunting species are much swifter on the wing than those that only frequent open ground ; their wings, indeed, are stouter, more cleanly cut, and the apex of forewing more pointed ; there is also a brilliant pearly gloss, brightest at the base of the wings, not observable in the species that only haunt fields, gardens, and open ground generally.

P. Hellica, which is common around Cape Town, appears to be widely distributed throughout the Colony, and, as far as I have observed, is never seen in woods. This will probably be one of the first of the *Pieridæ* taken by the collector, as it is very numerous, and to be found during the greater part of the year.

13. *Pieris Phileris*.

Pieris Phileris, *Boisd.*, *Faune Ent. de Mad.*, pl. 2, f. 3, 4, 5.

„ „ „ *Spec. Gen. Lep.* 1, p. 512, n. 108.

„ „ „ *App. Voy. de Deleg.*, p. 586.

„ „ *Chenu, Enc. d'Hist. Nat., Pap.*, pl. 18, f. 4.

Expands 2 in. 3 lin.—2 in. 5 lin.

“Closely allied to *Agathina* and *Poppea*, but larger ; the wings of a more delicate texture and rather more elongate, white, with a marginal series of large black spots. Forewings with the apex black, and the base yellowish. Under-side like the upperside, but instead of the black spot at apex, there are three dots in a line with the others. Base of fore-wing and origin of costa of hind-wing, orange-yellow. Female differs from male : the dots on upper-wing being replaced by a row of elongate, elliptical spots, sometimes forming almost a continuous band, divided at apex by two elongate, white, pale-yellow-dusted marks ; marginal dots wanting on under-side.”

The above description is taken from Dr. Boisduval's “Faune Entomologique de Madagascar, Bourbon and Maurice,” p. 17.

A species of *Pieris* in the South African Museum, taken by Mr. E. L. Layard on the coast of Madagascar, I am inclined to consider as a variety of the ♀ of *Phileris*. The principal differences between it and Boisduval's figure are these, viz. : the ground colour tinged with yellowish ; a dusky-blackish spot on sub-costal nervure of fore-wing, just before middle ; the marginal spots present on under-side, though much smaller ; on under-side

of hind-wing a median row of yellowish marks from costa to submedian; and a very indistinct row of elongate yellowish marks between nervules near hind-margin.

“Moselekatze’s Country.”—Boisd. (*App. Voy. de Deleg.*)

“Madagascar.”—Boisd. (*Faune Ent. de Mad., &c.*)

14. *Pieris Chloris*.

Papilio Chloris, *Fab., Syst. Ent.*, p. 473, n. 129.

„ „ *Dru., Ill. Nat. Hist.*, III, pl. 32, f. 3, 4.

Papilio Thermopyle, *Cram., Pap. Exot.*, pl. 207, f. F, G.

Papilio Chloris, *Herbst. Ins.—Schmett.*, V, pl. 99, f. 1, 2, 3, 4.

Pieris Chloris, *Godt., Enc. Meth.*, IX, p. 160, n. 143.

„ „ *Boisd., Sp. Gen. Lep.*, I, p. 516, n. 115.

„ „ „ *App. Voy. de Deleg.*, p. 586.

„ „ *Chenu, Enc. d’Hist. Nat., Pap.*, f. 498.

Expands 2 in. 1 lin.—2 in. 7 lin.

White; with blackish unspotted borders. Fore-wing: costa narrowly, apex widely, bordered with blackish. *Hind-wing*: a blackish band, composed of united spots, on hind-margin next anal angle (two separate spots continue the band, as it were, towards costa); in some specimens the black extends over more than half the wing. *UNDER-SIDE*.—*Fore-wing*: base flushed with orange-red; blackish apex as on upper-side, one spot, or two, below it on hind-margin. *Hind-wing*: costa at base orange-red; basal half of wing much tinged and varied with saffron-yellow; blackish hind-marginal band always very broad, and generally occupying fully half the area of wing.

“Natal.”—Boisd., *App. Voy. de Deleg.*

Sierra Leone.—Coll. Brit. Mus.

15. *Pieris Agathina*.

Papilio Agathina, *Cram., Pap. Exot.*, pl. 237, f. D, E.

Papilio Agatina, *Herbst., Ins.—Schmett.*, V, pl. 104, f. 4, 5.

Pieris Agathina, *Godt., Enc. Meth.*, IX, p. 139, n. 69.

„ „ *Boisd., Sp. Gen. Lep.*, I, p. 511, n. 106.

„ „ „ *Voy. de Deleg.*, p. 586.

Expands 2 in. 6 lin.—2 in. 10 lin.

♂. *White; with black marginal spots. Fore-wing*: costa narrowly, apex more widely, black; from four to six black rounded spots on hind-margin at ends of nervules. *Hind-wing*: six black spots on hind-margin at extremities of nervules. *UNDER-SIDE*.—Markings similar to upper-side. *Fore-wing*: apex yellow-ochreous, on its hind-marginal edge are three small spots continuous of the row along hind-margin; base suffused with orange-red. *Hind-wing*: entirely

pale-yellow ochreous; hind-marginal spots larger than on upper-side; portion of costa above costal nervure orange-red.

♀. *Varies from dull whitish-ochreous to dull orange-ochreous*; spots on hind-margins larger than in ♂. **UNDER-SIDE**.—Similar to ♂, but ground-colour of *fore-wing* dull yellowish, instead of white.

Variety A, of ♂ (Coll. Brit. Mus.)—Upper-side like the ordinary specimens, except that the marginal spots are larger. **UNDER-SIDE**.—Very distinctly marked, and richly-coloured. *Fore-wing*: the apical yellow *deeper* than in ordinary examples, three black dots defining its inner edge. *Hind-wing*: three of the hind-marginal spots wanting, but *an inner parallel row of small spots* between extremity of discoidal cell and hind-margin. From Natal.

Variety B, of ♀.—*Fore-wing* white, with the usual hind-marginal spots. *Hind-wing*: *bright sulphur-yellow*; seven marginal spots,—the additional one being at extremity of first sub-costal nervule. **UNDERSIDE**.—Yellow colouring paler and brighter than in ordinary specimens. *Fore-wing*: ground-colour *white*; no orange-red at base, but only a slight ochrey-yellow tinge. *Hind-wing*: base and costa as far as middle narrowly edged with orange-yellow.

Variety C, of ♀.—Similar to Var. B, but *hind-wing deep, creamy, yellow-ochreous*, like the underside of the finer ordinary specimens. **UNDERSIDE**.—Similar to that of Var. B, but of a much deeper, richer yellow, almost of the same shade as that of the upper surface of the hind-wing.

Both these beautiful varieties of the ♀ *Agathina* were sent me from King William's Town, by Mr. D'Urban. The contrast of the yellow hind-wings with the pure white of the fore-wings is as remarkable in these examples as it often is in *P. Zochalia*, Boisd.

"August, November to January, April to June."—D'Urban in litt.

Natal.—Coll. mihi, and Coll. S. A. Mus.

Natal. Sierra Leone. Congo.—Coll. Brit. Mus.

*King William's Town (W. S. M. D'Urban).—Coll. mihi.

Butterworth, Kaffraria (J. H. Bowker).—Coll. S. A. Mus.

16. Pieris Pigea.

Pieris Pigea, *Boisd., Sp. Gen. Lep.*, 1, p. 523, n. 124.

" " " *Voy. de Deleg.*,—*App.*, p. 586.

Pieris Pigea, *E. Doubl., App List Lep. Brit. Mus.*, p. 7.

Expands 1 in 11 lin.—2 in. 4 lin.

♂. *White, tinged with yellowish*. *Fore-wing*: apex narrowly edged with brownish; a rounded, brownish spot be-

* Mr. D'Urban has also met with this species at Graham's Town, East London, and Keiskamma Mouth, and notes it as "common."

tween first and second median nervules, midway between the insertion of the nervules and hind-margin; five small, dark-brownish dots on hind-margin, at extremities of nervules, the first on fourth sub-costal nervule, the fifth on the third median nervule. *Hind-wing*: six similar dots on hind-margin, the sixth on submedian nervure. **UNDERSIDE**.—*Fore-wing*: costa narrowly, apex broadly, suffused with glistening creamy-yellowish; spot between first and second median nervules as on upper-side; dots along hind-margin very small. *Hind-wing*: wholly of the same glistening yellowish as costa and apex of *fore-wing*; costa near base edged with orange-yellow; a row of five small, brownish spots between nervules, parallel to hind-margin, similarly situate to spot in *fore-wing*; seven spots on hind-margin, the first at apex.

♀. *Hind-wing*: *dull-yellow*; the brownish spots darker and larger than in ♂. *Fore-wing*: apex and hind-margin tinged with the same yellow as the whole of hind-wing; an additional dot in the hind-marginal row, at the extremity of the *sub-median* nervure. **UNDER-SIDE**.—Similar to ♂, but the glossy yellowish deeper in tint. *Hind-wing*: inner row of dots sometimes six in number, there being an additional, indistinct dot above second sub-costal nervule.

(*A variety of the* ♀, in the South African Museum, has the apex of *fore-wing* and whole of *hind-wing* rich creamy-yellow, *without* any of the glistening appearance commonly observable in this species).

This species is nearly allied to *P. Charina*.

Zoolu.—Coll. Brit. Mus.

Natal.—Coll. S. A. Mus.

17. *Pieris Charina*.

Pieris Charina, *Boisd.*, *Sp. Gen. Lep.*, I, p. 525, n. 128,

„ „ „ *App. Voy. de Deleg.*, p. 586.

Expands 1 in. 7 lin.—1 in. 10 lin.

♂. *Greenish-white*; with a bright pearly lustre, most brilliant near bases of wings. *Fore-wing*: base blackish; costa narrowly edged with blackish, wider so close to apex; on hind-margin a row of black dots, lessening towards anal angle, one at extremity of each nervule. **UNDER-SIDE**.—*Variable*. *Fore-wing*: a very small black dot at extremity of discoidal cell; costa narrowly, apex broadly, tinged with very pale dull-yellowish, sprinkled more or less thickly with dark-grey dots. *Hind-wing*: entirely of the same pale-yellowish; thickly sprinkled with grey atoms; costa at base tinged with *pale bright-green*; a distinct black dot at extremity of dis-

coidal cell; some dark-grey, ill-defined spots near base, arranged transversely; beyond middle, parallel to hind-margin, a band of about seven darker spots, commencing on costa with a rather conspicuous, larger mark; hind-marginal dots larger than those in *fore-wing*. The grey irrorations of the under-side are often very thinly sprinkled, and are frequently altogether wanting in the central portion of hind-wing.

♀. *Rather more yellowish than ♂, but with the same pearly lustre.* *Fore-wing*: a more or less distinct disco-cellular dot; beyond middle a row of brownish spots parallel to hind-margin, consisting of three small spots forming a streak from costa, and a rounded, larger spot between first and second median nervules; occasionally a fifth indistinct spot between third median nervule and inner-margin; spots on hind-margin very much larger than in ♂, contiguous, somewhat rhomboidal in form (in some instances almost forming a marginal stripe), the last spot on submedian nervure. *Hind-wing*: dots on hind-margin larger than in ♂, but not one-fourth the size of those in *fore-wing*; occasionally a row of spots beyond middle, similar to that on under-side of ♂, but not so distinct. *UNDER-SIDE*.—Similar to ♂. *Fore-wing*: the spots beyond middle faintly marked; hind-marginal dots barely larger than in ♂; base tinged with very pale greenish-yellow.

Woods and copses. Not unfrequent in gardens.

September (e)—May (m). "Throughout the year" (D'Urban).

Abundant where it occurs. At the Knysna this pretty little *Pieris* was the first of the Genus that I captured. It is a brisk flier, and may commonly be seen in the open spots of the woods congregated around a flowering bush. The brood of this Butterfly that appears later in the season consists of larger specimens than those perfected in the spring and early summer; it is also those of the late brood that are so little irrorated on the under-surface of the wings.

Knysna. Plettenberg Bay.—Coll. mihi.

Natal.—Coll. S. A. Mus.

Zoolu. Interior of South Africa.—Coll. Brit. Mus.

Port Elizabeth. Graham's Town. King William's Town, British Kaffraria.—(W. S. M. D'Urban).

Butterworth, Kaffraria (J. H. Bowker).—Coll. S. A. Mus.

* 18. *Pieris Creona*.

Papilio Creona, *Cram.*, *Pap. Exot.*, pl. 95, f. C, D, E, F.

" " *Herbst, Ins.—Schmett.*, V, pl. 98, f. 2, 3, 4, 5.

Amphæxis Creona, *Hübner, Verz. Bek. Schmett.*, p. 93.

Pieris Creona, *Gott.*, *Enc. Meth.*, IX, p. 131, n. 38.

" " *Boisd., Sp. Gen. Lep.*, I, p. 505, n. 99.

" " " *App. Voy. de Deleg.*, p. 586.

Expands 1 in. 11 lin.—2 in. 1 lin.

♂. *White; with black borders. Fore-wing*: a more or less distinct spot at extremity of discoidal cell; on hind-margin a broad, black band, widest at apex, containing about six white, sub-triangular spots, lessening towards anal angle. *Hind-wing*: a broad black band along hind-margin, containing traces of almost obliterated whitish spots; a small blackish spot on costa before apex. **UNDER-SIDE**.—Similar in marking to upper-side; *a more or less distinct disco-cellular spot in both wings. Fore-wing*: base tinged with pale yellow; spots in hind-marginal band larger and more distinctly defined than on upper-side. *Hind-wing*: pale-yellowish; costa from base, and space between median and sub-median nervures, tinged with orange; hind-marginal band containing a row of spots along its outer portion; black spot on costa before apex united to marginal band.

♀. “Larger than ♂, violaceous-white, the border wider. *Fore-wing*: base more or less powdered with blackish; costa black, united to the disco-cellular spot, which forms a short, oblique, very dark band. **UNDER-SIDE**.—*Fore-wing*: base often saffron-yellow. *Hind-wing*: violaceous-white, rayed with saffron-yellow along nervures. Border of both wings divided as in ♂.”

This description of the ♀ insect is from Dr. Boisduval’s “*Spécies Général des Lépidoptères*.” He further adds, “Specimens from Bengal usually have the under-side of hind-wing greenish; those from Nubia are often of an ochreous-yellow above, and deep yellow-ochre beneath.”

This species is very closely allied to *P. Severina*, of which I am inclined to think it only a variety. The principal differences from it that *Severina* presents are these, namely: *distinct white spots on upper-side of hind-marginal band, and the nervures on under-side of hind-wing always more or less clouded with black*. I only here allude to the male insects, not having seen a female of *P. Creona*; but, from what Boisduval states of the Nubian varieties, I have little doubt but that this sex would confirm me in the belief of the species being identical with *Severina*.

“Bay of Port Natal.”—Boisd., App. Voy. de Deleg.

Senegal. Bengal.—Coll. Brit. Mus.

“Dongola. Nubia. Senegal. Guinea Coast. Coromandel.”
—Boisd., Sp. Gen. Lep.

19. *Pieris Severina*.

Papilio Severina, Cram., Pap. Exot., pl. 348, f. G, H.

“ “ “ *Herbst. Ins.—Schmett.*, V, pl. 105, f. 1, 2.

Pieris Severina, Godt., Enc. Meth., IX, p. 131, n. 36.

“ “ “ *Boisd., Sp. Gen. Lep.*, I, p. 507, n. 101.

“ “ “ *App. Voy. de Deleg.*, p. 586.

Expands 1 in. 11 lin.—2 in. 2 lin.

♂. *White; with black margins.* *Fore-wing:* a black band on hind-margin, broad at apex, and narrowing to a point at anal angle, its inner edge irregularly dentate; a row of elongate white spots, from four to seven in number, in this hind-marginal band, lessening in size towards anal angle, but not extending below third median nervule; a small black spot at extremity of discoidal cell. *Hind-wing:* hind-margin with a black border, enclosing four rather large white spots, two or three of which are rarely indistinct; in some specimens, an irregular black mark on costa before apex (as in *P. Creona*); very rarely a thin blackish line at extremity of discoidal cell. *UNDER-SIDE.*—Very similar in marking. *Fore-wing:* spots in black margin lemon-yellow; costa edged with black; a projection from this black edging in a line with the disco-cellular dot. *Hind-wing:* ground-colour lemon-yellow; costa near base tinged with chrome-yellow; *nervures all more or less clouded with black scales;* black mark on costa conspicuous; a similar transverse black mark from insertion of first median nervule to about middle of submedian nervure, crossed by a longitudinal streak from median nervure not far from base to near anal angle; hind-marginal band containing five spots of the ground-colour, the *additional* spot being close to anal angle. *Fringes* white-spotted between nervules.

♀. *Varies from pale lemon-yellow to pale ochreous-yellow; hind-marginal black bands very broad.* *Fore-wing:* two or three yellow spots in band, close to apex; costa black-edged, a projection of black from it at extremity of discoidal cell sometimes almost touches disco-cellular spot, which is rounder and generally rather larger than in ♂. *Hind-wing:* costal spot united to hind-marginal band, which slightly *radiates on the nervules*, and contains a single yellowish spot close to apex; disco-cellular streak distinct. *UNDERSIDE.*—*Varies from lemon-yellow to rich chrome-yellow.* *Fore-wing:* ground-colour some tint of yellow between the two shades mentioned; suffused from base with orange or orange-yellow; usually, seven spots in hind-marginal band. *Hind-wing:* very like ♂, but often of a deeper yellow; nervures more broadly and universally clouded with black; six or seven spots in hind-marginal band.

"In woods at Knysna."—(Miss Wentworth.)

"October, 1860; August, 1861."—D'Urban in litt.

I never saw this species at the Knysna; but it appears to be common there in some seasons. I received several specimens from that locality, taken in the month of March, 1860.

Knysna.—Coll. mihi.

Port Elizabeth. King William's Town.—Coll. W. S. M. D'Urban.

Cape of Good Hope. Natal.—Coll. S. A. Mus.

Cape of Good Hope. Natal. Congo.—Coll. Brit. Mus.

20. *Pieris Gidica*.

Pieris Gidica, *Godt., Enc. Meth.*, IX, p. 131, n. 37.

„ „ *Boisd., Sp., Gen. Lep.*, I, p. 503, n. 97.

„ „ „ *App. Voy. de Deleg.*, p. 586.

„ „ *E. Doubl., App. List Lep. Brit. Mus.*, p. 7.

Expands 1 in. 11 lin.—2 in. 4 lin.

♂. *White; with blackish markings. Fore-wing: apex more produced and pointed than in any other South African Pieris; costa edged with blackish, close to base greyish; base slightly suffused with greyish, and with a pearly gloss; at extremity of discoidal cell, a black, angulated streak, united to blackish costal edging, and thickest at its lower extremity; on hind-margin a blackish band, rather wider at apex, and ending on third median nervule, enclosing six white spots, and united by blackish nervules to an inner, blacker, more irregular, transverse band ending on second median nervule. Hind-wing: from four to six moderately-sized, sub-triangular black spots on hind-margin at extremities of nervules; base greyish, with a slight pearly gloss; a few indistinct traces of the dark wavy streaks on under-side. UNDER-SIDE.—Fore-wing: similar in marking; apex tinged with pale-yellowish. Hind-wing: pale-yellowish, the nervures marked blackly upon it; costal, median, and sub-median nervures clouded with blackish; two transverse rows of irregular, blackish, wavy streaks—one before, the other beyond, middle,—the inner one much interrupted, and joining the dark clouding on median nervure—the outer one composed of thin lunular markings; neither row extending beyond sub-median nervure; hind-marginal spots larger and somewhat squarer than on upperside, some of them united by paler curved streaks from their inner extremities, which touch the points of the lunular marks of the outer transverse row; costa edged at base with bright-yellow.*

♀. *Dull-yellowish; blackish markings broader than in ♂. Fore-wing: apex not so produced as in ♂; base broadly suffused with greyish, and glossed with a violet lustre; a short, broad stripe of black from costa, at extremity of discoidal cell; inner band joined to hind-marginal one, which has no pale spots; both bands broader than in ♂, the narrow space enclosed between the two composing three or four*

yellowish spots, often indistinct; an ill-defined blackish spot beyond middle, between third median nervule and inner-margin. *Hind-wing*: a black elongate mark at extremity of discoidal cell; hind-marginal spots united by broad arched streaks, so as to form a series of *festoon-like* markings; before them a more or less connected row of arched streaks (as in underside of ♂), touching them. **UNDERSIDE**.—Very similar to ♂, but the markings proportionally *broad*er. *Fore-wing*: yellow tint paler than on upperside; base only light-greyish; yellow at apex rather deeper than in ♂. *Hind-wing*: deeper in tint than in ♂; blackish markings wider.*

Woods; sometimes in gardens near woods.

January (e)—February (e), and again in May.

"March (m)."—(Miss Wentworth.) "November to May."—D'Urban.

This is the most rapid-flying *Pieris* I know; indeed, the peculiar shape of the acute fore-wing seems to indicate increased powers of flight. Its rapid, irregular course, over and among the trees and underwood, renders it a difficult insect to capture on the wing; but its fondness for the honey of *Plumbago* and other flowers, will soon cause it to fall a prey to the watchful collector. It is a constant visitor to the lovely blossoms of the "Wild Chestnut" (*Calodendron Capense*), which are so powerful an attraction to insects of all sorts.

It is worthy of remark that, common as this Butterfly was at Plettenberg Bay, I only saw *one female* specimen; but, as I have since received several from Knysna, taken within a few days of each other, I imagine that the dearth of this sex was a peculiarity of the seasons of 1858—59.

Knysna. Plettenberg Bay.—Coll. mihi.

Port Natal.—Coll. Brit. Mus., and S. A. Mus.

Port Elizabeth (August, 1861). Graham's Town. Queen's Town. Keiskamma Mouth. King William's Town.—Coll. W. S. M. D'Urban.

21. *Pieris Mesentina*.

Papilio Mesentina, *Cram.*, *Pap. Exot.*, pl. 270, f. A, B.

Papilio Aurota, *Fab.*, *Ent. Syst.*, III, 1, p. 197, n. 614.

Papilio Mesentina, *Herbst.*, *Ins.*—*Schmett.*, V, pl. 91, f. 5, 6.

Pieris Mesentina, *Godt.*, *Enc. Meth.*, IX, p. 130, n. 34.

" " *Boisd.*, *Faune Ent. de Mad.*, p. 19, n. 5.

" " " *Sp. Gen. Lep.*, I, p. 501, n. 95.

" " " *Voy. de Deleg.*, App. p. 586.

" " *Chenu*, *Enc. d'Hist. Nat.*—*Pap.*, pl. 19, [f. 5.

" " *Horsf.*, *Cat. Lep. Ins. Mus. H. E. I. C. S.*, [I, p. 72.

Expands 2 in.—2 in. 5 lin.

* The ♀ of *Gidica* is variable in tint, some specimens being almost white in ground-colour, or but slightly tinged with yellow.

♂. *White; with blackish markings. Fore-wing*: a curved black streak at extremity of discoidal cell, thickest at its lower end; a black band on hind-margin narrowing to a point at anal angle, and containing, in the half near apex, six elongate, somewhat triangular, whitish marks; base with a pearly gloss. *Hind-wing*: a black border to hind-margin, intersected with white; a pearly gloss at base. **UNDER-SIDE**.—Similar in marking; faintly *tinged with yellowish. Fore-wing*: spots in hind-marginal band larger and more distinctly defined. *Hind-wing*: slightly yellower than fore-wing; all the nervures clouded with blackish; costa and submedian nervure tinged from base with chrome-yellow; a yellow mark about middle of inner margin; a blackish transverse stripe from extremity of discoidal cell to a little beyond middle of submedian nervure.

♀. *Varies from yellowish-white to dull-yellowish; markings similar to ♂, but all broader. Fore-wing*: curved band at extremity of discoidal cell connected with base by a black costal stripe; spots in hind-marginal band small and ill-defined, sometimes entirely wanting. *Hind-wing*: a small spot at extremity of discoidal cell; beyond middle, on costa, a blackish marking, sometimes united to hind-marginal band; the latter contains four slightly-rounded spots, which are sometimes wholly obliterated. **UNDER-SIDE**.—*Fore-wing*: spots near apex in hind-marginal band, of a lighter or deeper chrome-yellow. *Hind-wing*: wholly chrome-yellow; nervures conspicuously black-clouded; spots in hind-marginal band yellow, some occasionally obsolete; blackish streak from discoidal cell to submedian nervure often indistinct or wanting—a longitudinal black streak between the nervures meets it at right angles when present.

LARVA.—Pale-yellow, greenish on the back; a broad, brownish, lateral stripe from head to tail; head pinkish; a few short hairs near head and along the sides.

PUPA.—Sharply angulated, slender, head beaked. Light-brown, varied with darker-brown; a white, pink-spotted, longitudinal stripe on abdominal segments. Represented as suspended to the stalk of some plant.

The above descriptions of Larva and Pupa are made from figures in Plate 12, (f. 9, 9 a.), of Horsfield and Moore's Catalogue of Lepidoptera in the East India Company's Museum, Vol. 1. The food-plant of the Larva is not stated.

This species is allied to *P. Gidica*. It is very variable in tint and marking. Two specimens, apparently females, from Ceylon, in the South African Museum, want the black band on upperside that connects the disco-cellular stripe with base of fore-wing, though it is present on under-side.

Cape. Congo. North India. Ceylon.—Coll. Brit. Mus.
Damaraland.—Coll. C. J. Andersson.

Ceylon.—Coll. S. A. Mus.

“Natal, universally”—Boisd., *Voy. de Deleg.*

“Madagascar and neighbouring small islands, Bengal, Coromandel, &c.”—Boisd. *Faune de Mad., &c.*

Madras.—Coll. E. I. C. Mus.

22. *Pieris Zochalia*.

Pieris Zochalia, *Boisd., Sp. Gen. Lep.*, I, p. 506, n. 100.

“ ” ” ” *App. Voy. de Deleg.*, p. 586.

Expands 1 in. 5 lin.—2 in. 1 lin.

White; with black markings. *Fore-wing*: basal half of wing with a brilliant pearly gloss; a short black disco-cellular stripe from costa, contracted in its middle portion, broader in the ♀; a deep-black band on hind-margin, narrowing to a point at anal angle, irregularly excavate on its inner edge, and generally containing four or five sub-triangular white spots, which are occasionally almost obsolete. *Hind-wing*: sometimes rich creamy-yellow instead of white; generally a thin black line or streak at extremity of discoidal cell; on costa, beyond middle, a curved, transverse black streak; on hind-margin a row of six sub-rhomboidal, black spots, generally united by an inner, regularly-festooned, black streak, which touches their inner extremities; base slightly glossed with a pearly lustre. *UNDERSIDE*.—*Forewing*: similar in marking; base generally suffused with bright-yellow; spots in hind-marginal band much larger than on upper-side, of a pale greyish-yellow, only separated by the black-clouded nervules. *Hind-wing*: entirely pale greyish-yellow; all the *nervules* broadly defined with black; spot on costa and festooned streak as on upperside; spots on hind-margin much thinner than on upperside; costa at base edged with bright-yellow; a bifid black longitudinal streak in discoidal cell, and a simple similar streak between median and sub-median nervures, not reaching to base; a short, transverse, black mark from extremity of discoidal cell to near middle of sub-median nervure.

Woods and copses; rarely in gardens.

September (e)—May (m)

The rich deep-black of the bands and spots of this lovely Butterfly, contrasted with the glossy white and yellow, makes it one of the most striking species of the Genus. It is an active flier, and may generally be found flying along the edges of woods, or the open spots on the outskirts, settling frequently on flowers. It seldom rises to any elevation, and is, consequently, not difficult to capture. It appears to be only found in Southern Africa.

Knysna, Plettenberg Bay.—Coll. mihi.

Kei Mouth, Kaffraria (J. H. Bowker).—Coll. S. A. Mus.

Cape of Good Hope.—Coll. Brit. Mus.

"Amazoulu Country."—Boisd.

23. *Pieris Calypso*.

Papilio Calypso, *Drury, Ill. Nat. Hist.*, II, pl. 17, f. 3, 4.

" " *Cram., Pap. Exot.*, pl. 154, f. C—F.

" " *Herbst., Ins.—Schmett.*, V, pl. 97, f. 5—8.

" " *Fab., Ent. Syst.*, III, 1, p. 191, n. 592.

Pieris Calypso, *Godt., Enc. Meth.*, IX, p. 130, n. 33.

" " *Boisd., Sp. Gen. Lep.*, I, p. 504, n. 98.

" " " *App. Voy. de Deleg.*, p. 586.

" " *Chenu, Enc. d'Hist. Nat.—Pap.*, pl. 25,
[f. 5.]

Expands 2 in. 5 lin.—2 in. 11 lin.

♂. *White; with blackish borders. Fore-wing*: costa blackish: a round black spot at extremity of discoidal cell; on hind-margin a blackish band, narrowing to anal angle, and containing four or five elongate whitish marks. *Hind-wing*: a row of black, somewhat rhomboidal spots on hind-margin, at extremities of nervules. **UNDERSIDE**.—*Fore-wing*: white; disco-cellular spot connected with costa by a more or less distinct black streak; pale spots in hind-marginal band near apex larger than on upper-side and creamy-yellow. *Hind-wing*: creamy-yellow; costa from base edged with orange; a large, oval, black spot at extremity of discoidal cell; beyond middle, a row of seven somewhat ovate, black spots from costa to near anal angle: hind-marginal spots rhomboidal, slightly larger than on upper-side.

♀. *Dull whitish, with a violaceous tinge*, occasionally with a yellowish cast; the blackish borders and spots broader than in ♂. *Fore-wing*: base broadly suffused with faint-blackish; costa bordered with blackish; a moderately broad black stripe from costa at extremity of discoidal cell; hind-marginal band broader than in ♂, spotless, or with very indistinct spots—scarcely paler than the band itself. *Hind-wing*: a more or less apparent spot at extremity of discoidal cell; hind-marginal spots united, so as to form a band; occasionally a row of rounded black spots beyond middle, parallel to hind-margin; ground-colour sometimes pale chrome-yellow instead of white. **UNDER-SIDE**.—Very similar to ♂, excepting for the broader black markings. *Fore-wing*: suffused with yellow from base; pale stripes in band near apex larger than in ♂, and of a deeper yellowish. *Hind-wing*: white, with chrome-yellow, longitudinal stripes on costa, hind-margin,

and inner-margin; spots as in ♂. In specimens having the upper-side of hind-wing *yellowish*, the underside is rich, deep chrome-yellow, with the spots larger than in ordinary specimens, and sometimes united along hind-margin.

I have not seen a South African specimen of *P. Calypso*, but include the species in my list on the authority of Boisduval, who gives Natal as its habitat. I made the above description from fine West African examples in the British Museum. It may be known from the other species found in South Africa by its larger size.

"Bay of Port Natal."—Boisd., App. Voy. de Deleg.

Sierra Leone.—Coll. Brit. Mus.

24. *Pieris Hellica*.

Papilio Hellica, Linn., *Syst. Nat.*, II, p. 760, n. 78.

Papilio Helice, Linn., *Mus. Lud. Ulr. Reg.* p. 243, n. 62.

Papilio Hellica, Cram., *Pap. Exot.*, pl. 171, f. C, D.

Synchlœ Hellica, Hübn., *Verz. Bek. Schmett.*, p. 94.

"*Hellica*," Samml. Exot. Schmett., Band 1.

Pieris Hellica, Godt., *Enc. Meth.*, IX, p. 139, n. 69.

"*Hellica*," Boisd., *Sp. Gen. Lep.*, I, p. 546, n. 156.

"*Hellica*," App. Voy. de Deleg., p. 586.

Expands 1 in. 6 lin.—1 in. 9 lin.

♂. *White*, with blackish markings. *Fore-wing*: base narrowly greyish; costa narrowly edged with blackish; at extremity of discoidal cell, a rather broad, short, blackish stripe, extending above sub-costal nervure, but not touching costal edge; a broad, blackish stripe on hind-margin, abruptly terminating on 2nd median nervule, and containing 4 rounded white spots, the 3rd of which, from costa, is commonly connected with the white ground-colour of wing, dividing the band into 2 portions. *Hind-wing*: on hind-margin a row of black dots, one at extremity of each nervule. **UNDER-SIDE**.—*Fore-wing*: as on upper-side, but disco-cellular stripe extended to costa by some fainter blackish colouring; apical portion of hind-marginal band tinged and dusted with chrome-yellow. *Hind-wing*: *nervures much clouded with yellow-dusted grey*, leaving a central, transverse, curved band of white, and forming a row of five or six white spots on hind-margin; costa at base, and most of the spaces between clouded nervures, tinged with bright chrome-yellow.

♀ Similar to ♂, but with additional black markings. *Fore-wing*: costa with a greyish border as far as disco-cellular band, which is much broader than in ♂; hind-marginal band slightly broader and blacker than in ♂; its third white spot *always quite enclosed* in the black; two additional blackish spots near anal angle, between third median

nervule and inner-margin, the lower one smaller and fainter, and forming a continuation of the upper one. *Hind-wing*: a blackish band along hind-margin, commencing with a dark mark on costa (adjoining spot on inner-margin of fore-wing), becoming obsolete towards anal angle, and containing four or five rather large, ovate white spots. **UNDERSIDE**.—Similar to ♂. *Fore-wing*: only the upper of the two additional spots present. *Hind-wing*: the clouding of the nervules wider than in ♂, in some strongly marked specimens so much so as to leave only a row of small white spots in place of the central white band.

PUPA.—*Light violet-grey*, dusted with black dots; a pale-yellow stripe on each side of the abdomen.

(I found a single Pupa of *P. Hellica*, on December 10th, 1858, attached to the white-washed wall of a house at the Knysna. When first discovered, its colour was *yellow*, dusted with black dots; the underside of the head and body, and the wing-covers, *pale-green*; and a *violet* stripe down the back from head to tail. The butterfly emerged on December 20th.)

Open ground, fields, hill-sides, gardens, &c.

September (e)—June (e).

An abundant species, and may be found during nearly all the year. It is a weak flier, compared with the forest-haunting species of *Pieris*, and is, in general, very easily taken. In the summer, at Knysna, the numbers of this species in the low-lying, meadow-land quite enlivened the place. It is also very common around Cape Town. *P. Hellica* is very similar in appearance to the European *P. Daplidice*.

“Very abundant: all the year round.”—D’Urban, in litt.

Cape Town. Mossel Bay. Knysna. Plettenberg Bay. D’Urban, Natal (R. C. Jones).—Coll. mihi.

Port Elizabeth. Graham’s Town. Queen’s Town. King William’s Town.—Coll. W. S. M. D’Urban.

Butterworth, Kaffraria.—Coll. H. Bowker.

Cape of Good Hope.—Coll. S. A. Mus.

Cape of Good Hope. Interior of South Africa.—Coll. Brit. Mus.

“Bay of Port Natal.”—Boisd.

25. *Pieris Eriphia*.

Pieris Eriphia, *Boisd.*, *Sp. Gen. Lep.*, I, p. 513, n. 109.

“ ” *Chenu*, *Enc. d’Hist. Nat.*—*Pap.*, p. 48. f. 130.

Expands 2 in. 2 lin.—2 in. 4 lin.

Yellowish-white, *variegated with broad black stripes*;—*about equal areas of black and white*. *Fore-wing*: a broad, black band from base occupies all discoidal cell, extending considerably below and beyond it, and united by a narrower

black stripe to a broad band on hind-margin; the latter band containing five variously-shaped, white spots, (of which that next costa is very small, the second, third, and fifth of moderate size, the fourth large and ovate), and so *widened on inner-margin* as to occupy the outer half of it; in black discoidal cell a paler longitudinal streak. *Hind-wing*: a transverse black stripe at base; before middle a black stripe, with two or three irregular indentations on its edges, straight across wing from costa near apex to about middle of inner-margin; from commencement of this band, all along hind-margin to anal angle, a black band—abruptly widened, and with a straight inner edge parallel to the band before middle, from discoidal nervule to inner-margin—containing six or seven good-sized white spots. Fringes of wings yellowish-white. *UNDER-SIDE*.—*Fore-wing*: black markings clouded with white near inner-margin, pale and brownish tinted in central portion, and replaced by grey-dusted ochreous at apex; longitudinal streak in discoidal cell widened to a broad, yellowish-white stripe. *Hind-wing*: costa, especially near base, edged with orange-yellow; basal, median, and hind-marginal bands dark-grey-dusted ochreous; the median band more irregular and macular than on upper-side; the spots on hind-margin larger, but not so clearly defined.

“In gardens; March.”—(Miss Wentworth).

I am indebted to the kindness of a lady at Knysna, for the possession of this handsome species. Until her discovery of it, I did not think it an inhabitant of South Africa; though two specimens in the South African Museum, from Drege’s collection, were believed by Mr. Layard to have been taken in some part of the country. It is well known as an inhabitant of Western Africa.*

Knysna—Coll. mihi.

South Africa.—Coll. S. A. Mus.

Damaraland.—Coll. C. J. Anderson.

The following characters of the Larva and Pupa of *Pieris* should have followed those of the Imago:

LARVA.—Rather elongate, pubescent, usually with longitudinal stripes; head rather small. Feeds on *Crucifere*, and allied plants.

PUPA.—Rather slender; projection at head and dorsal prominence acute. Generally pale in colouring, with darker irroration.

* This beautifully-marked species has since been taken by Mr. D’Urban at Pluto’s Valley, twelve miles from Graham’s Town, and he gives me the following note of its capture:

“April 4th, 1861.—Numerous; a rapid flier.”

Genus ANTHOCHARIS.

Anthocharis, *Boisd.*

Pieris (pars), *Boisd.*

Euchloë, *Aphrodite*, *Hübner*.

Mancipium (pars), *Horsf.*

IMAGO.—Closely allied to *Pieris*. *Head* of moderate size: *eyes* prominent, smooth; *palpi* rather more compressed than in the last Genus; *antennæ* shorter, the club rather more abruptly formed. *Thorax* robust, clothed with silky hair. *Fore-wings*: costa not quite so arched as in *Pieris*; apex more rounded, particularly in the females of some species; hind-margin nearly straight, or more or less convex. *Hind-wings* very much rounded; hind-margin slightly more dentate than in *Pieris*. *Abdomen* very slender in males; generally a little more elongate than in the last-mentioned Genus.

PUPA.—“Boat-shaped, being widest in the middle and narrowing gradually to both ends.”—Duncan, Brit. Butt.

This Genus, as far as I am aware, is better represented in Southern Africa than in any other part of the world. The species comprised in it are some of the most elegant and beautiful Butterflies known, though not attaining to any great size. The great character of the Genus, in point of marking, is a more or less triangular large patch of bright colour occupying the apical portion of fore-wings. The colour of this apical marking is most commonly some shade of bright red or orange, often with a lovely rosy gloss; but in the handsome *A. Ione* it is of a lustrous pinkish-violet, and in *A. Eris* of a peculiar dull greyish-yellow. No less than fourteen species are enumerated as South African, but two of these, I think, possess but a doubtful claim to the rank of species. As, however, I know nothing of the earlier states of any of the species, and the extreme similarity of many of the females renders it a difficult matter to distinguish between them, I can only give the several species as at present recognised, until more experience enables me to speak more decidedly concerning them. Woods and their outskirts are the favourite haunts of the species of *Anthocharis*, whose flight is commonly more rapid and long-sustained than that of the various kinds of *Pieris*. Unless very close to the observer the bright-red apex is all but invisible when the insect is on the wing. Any instances of the male and female being taken *in copulâ* should be carefully noted, and the insects labelled distinctively at once; as nothing, next to the careful rearing of the Butterflies from Cater-

pillars, will tend more to the elucidation and establishment of species than the possession of indubitable male and female specimens of one or more kinds.

26. *Anthocharis Ione*.

Pieris Ione, *Godart, Enc. Meth.*, IX, p. 140, n. 74.

„ „ *Boisd., Sp. Gen. Lep.*, I, p. 515, n. 112.

Anthocharis Ione, *Boisd., App. Voy. de Deleg.*, p. 587.

„ „ *E. Doubl., App. List Lep. Brit. Mus.*, p. 10.

Expands 2 in. 3 lin.—2 in. 6 lin.

♂. *White; with lustrous-violet apical marking* *Fore-wing*: the nervures defined and black excepting in central portion; base and costa greyish; a black disco-cellular dot; violet band at apex divided into four by the nervules, margined both outwardly and inwardly with a rather broad black band, the outer band narrowing to a thin streak at anal angle. *Hind-wing*: base greyish; nervures all black, with moderately large black spots on their hind-marginal extremities. *UNDER-SIDE*.—*Fore-wing*: costa yellowish; apex tinged with greenish-yellow; disco-cellular spot larger than on upper-side. *Hind-wing*: pale greenish-yellow; the nervures not black; a distinct spot at extremity of discoidal cell; costa from base edged with orange-yellow; an elongate blackish spot on costa a little beyond middle; spots at extremities of nervules indistinct or almost obsolete.

♀. *White of a more yellowish tint than in ♂; the apical patch bright orange.* *Fore-wing*: disco-cellular spot larger and rounder than in ♂; orange apical band divided lengthwise by a row of four black spots, the black bands bordering it broader than in ♂, and extending to anal angle; a large sub-quadrate blackish spot near anal angle immediately above sub-median nervure. *Hind-wing*: on costa, immediately below spot near inner-margin of *fore-wing*, a blackish streak commences, narrowing and gradually disappearing towards centre of wing; hind-margin broadly black, dentated with white on the nervules. *UNDER-SIDE*.—*Deeper in tint than ♂.* *Fore-wing*: white; apical patch dull lemon-yellow, flushed on its inner-side with orange-ochreous, and divided (as on upperside) by a row of black spots; disco-cellular and inner-marginal spots as on upper-side. *Hind-wing*: entirely dull lemon-yellow; costa tinged with orange-yellow; a narrow black spot at extremity of discoidal cell; a transverse blackish stripe from costa beyond middle towards anal angle.

Var. ♀.—In the collection of the British Museum, from Natal.—*The orange at apex of fore-wing wholly wanting, and*

replaced by three large, connected whitish spots; the black markings broader and less defined at edges than in ordinary specimens.

The above-mentioned variety of the female is noticed, rather doubtfully, by Boisduval (in his Appendix to M. Delegorgue's Travels) as one which he supposes "ought to be considered as a variety of the female of *Ione*." After carefully comparing the specimen in the British Museum with the orange-tipped examples, no doubt remains in my mind—knowing the constant tendency of the species of this Genus to vary in this respect—of its being the real *Ione*.

Natal.—Coll. mihi; Coll. S. A. Mus.; Coll. Brit. Mus.

"Natal; common throughout."—Boisd., App. Voyde Deleg.

"Nubia, Abyssinia."—Boisd., Sp. Gen. Lep.

27. *Anthocharis Danaë*.

Papilio Danaë, *Fab.*, *Syst. Ent.*, p. 476, n. 144.

„ *Eborea*, *Cram.*, *Pap. Exot.*, pl. 352, f. C, D, F. F. *Aphrodite Eborea*, *Hübner*, *Verz. Bek. Schmett.*, p. 94.

Pieris Danaë, *Godt.*, *Enc. Meth.*, IX. p. 124, n. 20.

Anthocharis Danaë, *Boisd.*, *Sp. Gen. Lep.*, I. p. 570, n. 16.

„ „ *Doubl. Westw. Hewits.*, *Gen. Diurn.*
[*Lep.*, pl. 7, f. 2.]

„ „ *Boisd.*, *App. Voy. de Deleg.*, p. 587.

Callosune Danaë, *Horsf. & Moore*, *Cat. Lep. E. I. C.*
[*Mus.*, p. 69.]

Expands 1 in. 4 lin.—2 in.

♂. *White; with very large, broad, crimson-red apical marking.* *Fore-wing*: costa black-edged; basal portion suffused with dark-grey to beyond middle of discoidal cell; red patch at apex glossed with violet in some lights, with a narrow black border externally, radiating for a little distance on nervules; internal border broad, blackish, ill-defined on its inner edge, extending to anal angle, and touching extremity of discoidal cell, where there is a lunular black spot; between third median nervule and sub-median nervule, almost touching internal border of red patch, a very faint, indistinct blackish mark. *Hind-wing*: broadly suffused with dark-grey as far as extremity of discoidal cell (where there is a faint orange spot), and also as far as anal angle, where it is paler; on costa, beyond middle, a transverse, short, blackish streak, from which a broad blackish band, generally divided by whitish nervules, extends along hind-margin, narrowing to anal angle. *UNDER-SIDE*.—*Fore-wing*: white; basal grey paler than on upper-side, its outer edge defined by a blackish streak; disco-cellular spot larger and rounder than above; apical patch faint ochreous, marked on its inner side by a sinuate row of six blackish spots, all but

the lowest in ill-defined brick-red rings; spot below third median nervule blacker and distincter than on upper-side, and continuous of the sinuate row of spots; nervules on hind-margin suffused with blackish, which forms spots on the three next anal angle. *Hind-wing*: of a slightly more yellowish tint than fore-wing; costa edged with orange-yellow from base; grey suffusion extending as far as on upper-side, but very much paler; a rather large, orange-red, black-ringed spot at extremity of discoidal cell; beyond middle, from costa to sub-median nervure, a sub-angulated row of seven, red-centred, blackish spots; nervules clouded with blackish, between row of spots and hind-margin.

♀. *Fore-wing*: suffusion from base much darker than in ♂, extending further towards middle; disco-cellular spot larger, ovate; *apical marking dull-red, inclining to orange, and without violet lustre*, broadly black bordered externally, and divided by a transverse, sinuate band of contiguous black spots, similar to those on under-side of ♂; spot below third median nervule large, black, quadrate, joined to inner border of apical marking. *Hind-wing*: dark suffusion not extending further than in ♂, but of the same brownish-black as in fore-wing; disco-cellular orange spot hardly perceptible; costal mark beyond middle continued across wing by a row of contiguous blackish spots, which become merged in the blackish bands on inner-margin and hind-margin—(the latter of which is broader than in ♂)—near anal angle. **UNDER-SIDE.**—Like that of ♂. *Fore-wing*: apical marking yellower, and more broadly red inwardly, than in ♂; the black spots dividing it contiguous. *Hind-wing*: yellowish, darker than in ♂; row of spots beyond middle larger. *Fringes* pale-yellowish, tinged with pink, especially in ♀.

Specimens taken by Mr. D'Urban are somewhat paler than the description of the ♂ above given, and with less dark suffusion at bases of wings. They were taken in September and December, 1860, and June and July, 1861.

Natal.—Coll. S. A. Mus.

Keiskamma River. Fish River Bush.—Coll. W. S. M. D'Urban.

Damaraland.—Coll. C. J. Andersson.

Natal. Bengal. Ceylon.—Coll. Brit. Mus.

Madras.—Coll. E. I. C. Mus.

28. *Anthocharis Eupompe*.

Anthocharis Eupompe, *Boisd., Sp. Gen. Lep.*, I, p. 571, n. 17.

„ „ *E. Doubl., List. Lep. Brit. Mus.*,
[I, p. 9.

Expands 1 in. 6 lin.—1 in. 7 lin.

Allied to *A. Danaë*.

♂. *White; with crimson-red, violet-glossed apical patch. Fore-wing*: apical marking margined outwardly by a narrow, inwardly by a broad, blackish band, meeting a little above anal angle; a thin, indistinct blackish dot at extremity of discoidal cell. *Hind-wing*: hind-margin narrowly edged with black, which is sometimes so intersected with white as to leave only spots at extremities of nervules. **UNDER-SIDE.**—*Fore-wing*: base tinged with lemon-yellow; apical patch pale ochreous, marked on its inner edge with a transverse row of four blackish spots in ill-defined brick-red rings; disco-cellular dot more distinct than on upper-side; on hind-margin, a row of black dots at extremities of nervules. *Hind-wing*: tinged with yellowish; a red spot at extremity of discoidal cell; on costa, beyond middle, a reddish-grey mark; on hind-margin, a row of small black spots at extremities of nervules.

♀. *Fore-wing*: apical patch red, without violet gloss, with broader black margins, and divided by a sinuate band of blackish spots, extending from costa to a little above and beyond middle of inner-margin; spot at extremity of discoidal cell rather large and rounded. *Hind-wing*: a more or less distinct disco-cellular spot; beyond middle, a transverse row of indistinct blackish spots, parallel to hind-margin; spots on hind-margin larger than in ♂. **UNDER-SIDE.**—Similar to ♂. *Fore-wing*: apical marking deeper in tint, the spots crossing it larger than in ♂, and the latter continued, as on upper-side, almost to inner-margin by a larger spot. *Hind-wing*: yellower than *fore-wing*; disco-cellular spot pale-red, and black-margined; a curved row of seven or eight blackish spots, parallel to hind-margin, from costa beyond middle to inner-margin; black spots on hind-margin at ends of nervules.

Var. ♀.—In the collection of the British Museum, from South Africa.—All the black markings larger and more shaded off at edges; *red of apical marking almost wholly obliterated.* **UNDER-SIDE.**—*Hind-wing*: spots forming transverse band larger than usual, and of a dull pinkish-red colour.

South Africa. North India.—Coll. Brit. Mus.

29. Anthocharis Achine.

Papilio Achine, *Cram., Pap. Exot.*, pl. 338, f. E. F.

„ „ *Herbst, Ins.—Schmett.*, V, pl. 95, f. 9, 10.

Aphrodite Achine, *Hübner, Samml. Exot. Schmett.*, Band 1.

Pieris Achine, *Godt., Enc. Meth.*, IX, p. 122, n. 13.

Anthocharis Achine, *Boisd., Sp. Gen. Lep.*, IX, p. 574,
[n. 21.]

App. Voy. de Deleg., p. 587.

Expands 1 in. 2 lin.—1 in. 10 lin.

♂. *White*; *apical patch bright-red, inclining to orange, but glossed with a rosy lustre.* *Fore-wing*: apical red divided into six by the dark nervules crossing it, margined outwardly by a narrow black stripe sharply indenting the red by radiating upon the nervules, inwardly by a thin, blackish, ill-defined streak; costa edged with blackish; a distinct, round, black dot at extremity of discoidal cell; a broad, blackish band along inner-margin, to beyond middle, where it very slightly curves upwards and ends abruptly. *Hind-wing*: base greyish; a blackish band along costa adjoining that on inner-margin of fore-wing, and abruptly ending immediately below where the latter ends; on hind-margin, at extremities of nervules, a row of black spots, variable in size, and inclining to form a continuous band, generally diminishing to anal angle. UNDER-SIDE.—*Fore-wing*: apical marking soft creamy-yellow, inwardly pale orange; disco-cellular spot distinct; inner-marginal band pale-greyish from base, ending in a darker spot. *Hind-wing*: pale creamy-ochreous, or creamy-reddish, more or less irrorated with grey atoms; costa, from base to beyond middle, edged with bright orange-yellow; disco-cellular spot orange, outwardly black-dotted; a scarcely perceivable greyish tint along costa indicates the position of the costal band, the extremity of which is always shown by a greyish mark.

♀. *Very variable in size, frequently smaller than ♂.* *Fore-wing*: red at apex much narrower than in ♂, of a more orange tint, and without rosy lustre, its black borders much wider, especially the inner one (which latter is, however, often intersected by the red, and occasionally with faint reddish colouring on its inner-side); spot at extremity of discoidal cell larger than in ♂; inner-marginal blackish band broader and darker, its upper edge not clearly defined, but gradually shading off in discoidal cell to near costa, and its outer extremity often united to inner black border of apical marking, on first median nervule, by a narrow, upward, blackish streak. *Hind-wing*: grey at base, and costal band, similar to the same in ♂, but broader and darker; from extremity of band, a more or less marked blackish streak extends almost to middle of hind-margin, where it meets the row of black spots (larger and more contiguous than in ♂), and from whence it turns off at right angles to beyond

middle of inner-margin, this latter portion being broader and straighter than the rest. UNDER-SIDE.—*Duller in colour than in ♂*. *Fore-wing*: a blackish streak bordering inner side of apical marking; inner-marginal band greyish, ending in a well-marked black spot, which is often united by a thin, faint-blackish streak, to the inner border of apical marking, as on upperside; base sometimes tinged with pale yellow. *Hind-wing*: greyer in tint than in ♂, but marked similarly, excepting more or less indistinct pale-brownish traces of the angulated band on upper-side.

Var. ♀.—In the Collection of C. J. Andersson, Esq., from Damaraland.—The blackish markings very broad, dark, and suffused over the surface; *the red at apex entirely wanting*.

Outskirts of woods, and fields, and hill-sides in their vicinity.

November—April. "September—May."—D'Urban.

This very pretty species, which appears to be very widely distributed in the South of Africa, was not uncommon at Knysna during my stay there. It has the habit of flying irregularly along the edge of a wood, but does not settle so frequently as the species of *Pieris*. Specimens from Port Natal are generally larger, and with broader and darker black markings, than those I obtained within the Cape Colony. Dr. Boisdual, as cited below, gives the extensive range of "from the Cape to Delagoa Bay," for this species; and the discovery of it by Mr. Andersson, in the tropical region of Damaraland, seems to indicate that it is as widely extended in the South-West as the South-East of Africa.

"Fish River Bush to King William's Town: abundant."—D'Urban.

Knysna, Plettenberg Bay.—Coll. mihi.

British Kaffraria.—Coll. W. S. M. D'Urban.

Butterworth, Kaffraria (J. H. Bowker).—Coll. S. A. Mus.

Natal.—Coll. S. A. Mus. et Coll. Brit. Museum.

Damaraland.—Coll. C. J. Andersson.

"Cape to Delagoa Bay"—Boisd. in App. Voy. de Deleg.

* 30. *Anthocharis Antevippe*.

Anthocharis Antevippe, Boisd., *Sp. Gen. Lep.*, I, pl. 18,
[f. 3, & p. 572, n. 19.

" " *E. Doubl., App. List. Lep. Brit.*
[*Mus.*, p. 9.

Expands 1 in. 8 lin.—1 in. 10 lin. (♂).

♂. *White*; with *bright-red (inclining to orange)*, *rosy-glossed apical patch*, margined and divided as in *A. Achine*. *Fore-wing*: a black disco-cellular dot; base greyish; *no trace of an inner-marginal blackish band*. *Hind-wing*: base greyish, a few scattered grey scales extending along costa—but no costal band; hind-marginal spots as in *Achine*, but smaller; UNDER-SIDE.—Very similar to that of *A. Achine*.—*Fore-wing*: apical marking paler, especially the orange-tint on its

inner portion, powdered with grey atoms; disco-cellular dot distinct; no trace of inner-marginal band. *Hind-wing*: pale creamy-ochreous, thickly irrorated with grey atoms; disco-cellular dot smaller than in *Achine*, less distinct, barely tinged with orange-yellow; costa not edged with orange so far as in *Achine*.

♀. "Often rather smaller; orange patch more sharply indented outwardly, more broadly margined with black, traversed in its broadest part by a sinuate black band; base of both wings powdered with dusky atoms; *hind-wing* traversed by an arched sinuate band, commencing, as in allied species, with a blackish spot on inner-margin of *fore-wing*. UNDERSIDE.—*Fore-wing*: white; fulvous patch slightly tinged with violet-grey; base tinged with sulphur-yellow; a black spot on inner-margin. *Hind-wing*: reddish-grey, with thinly-scattered brownish atoms; and traces of the transverse band on upper-side."—*Boisd., Sp. Gen. Lep.*, I, p. 572.

Borders of woods.

November.

The habits of the ♂ insect entirely correspond with those of *A. Achine*, of which latter I am strongly disposed to consider it a variety. As far as the ♂ insect is concerned, the only great difference between it and the same sex of *Achine*, is the total absence of the longitudinal blackish bands. The other slight differences noted are only of that nature which indicates individual variation. With regard to the description of the ♀, given by Boisduval, there is nothing in it that will not apply to the ♀ of *Achine*, excepting the character of the red being "*more sharply indented than in the ♂, on its outer edge*"—the reverse of which is true in all the female specimens of *Achine* that I have seen. His statement of the red being "traversed" by a black band may refer to a specimen in which the red extends within the inner black border, which, as I have noted in my description of *A. Achine*, is not of rare occurrence in the finer specimens of the ♀ of that species. As, however, it is impossible to decide in cases like the present, without further knowledge of the several species of the Genus, I think it only right to leave the doubtful *Antevippe* as a *species*; commending the subject to the investigation of South African Collectors.*

Knysna.—Coll. mihi.

British Kaffraria.—Coll. W. S. M. D'Urban.

Butterworth, Kaffraria (J. H. Bowker)—Coll. S. A. Mus.

Natal. Senegal.—Coll. Brit. Mus.

* Since the above was written, I have seen two indubitable specimens of the ♀, one captured by Mr. D'Urban, and the other by Mr. J. H. Bowker. In both instances the sexes were taken *in copulā*, and the ♂ preserved as well as the ♀. Mr. D'Urban's specimen in no respect differs from ordinary ♀ specimens of *A. Achine*; but in Mr. Bowker's example, the black bands usually so predominant are very indistinct. A specimen intermediate between these two examples is in Mr. D'Urban's collection. Little doubt now exists in my mind as to *Antevippe* being simply a variety of the variable *Achine*. I may add that Mr. D'Urban's observations have convinced him that *Antevippe* is not distinct.

31. *Anthocharis Omphale*.

Pieris Omphale, *Godt., Enc. Meth.*, IX, p. 122, n. 12.

Anthocharis Omphale, *Boisd., Sp. Gen. Lep.*, I, p. 574,
[n. 22.]

“ “ “ “ *App. Voy. de Deleg.*, p. 587.
Expands 1 in. 4 lin.—1 in. 7 lin.

Allied to *A. Achine*.

♂. *White*; with orange-red apical patch, not glossed with rosy. *Fore-wing*: not so pointed as in *Achine*; hind-margin more convex; apical red not so broad, its outer border not so deeply or sharply indenting it, but extending to anal angle (near which it is much narrower), its inner border wider and blacker than in *Achine*, except at a little distance from costa, where it is much narrowed; no dot at extremity of discoidal cell; band on inner-margin broader and blacker, not inclining to curve upwards at its extremity. *Hind-wing*: costal band as in *Achine*, but blacker; parallel to it, beyond middle, an irregularly dentate, slightly curved, blackish stripe, from inner-margin to about middle of hind-margin; a row of five black spots along hind-margin, at ends of nervules, more separate from each other than in *Achine*, and not extending beyond second median nervule. UNDER-SIDE.—*Fore-wing*: apical marking ochreous, indistinctly irrorated with grey, its inner half dull orange; no disco-cellular spot; inner-marginal band very faintly indicated by pale-greyish, slightly darker at its extremity. *Hind-wing*: pale-creamy, or reddish-creamy, with brownish irrorations, rather thinly-scattered; a brownish spot on costa beyond middle indicates extremity of costal band; curved stripe beyond middle usually well-marked, reddish-brown; a distinct, orange, black-dotted, disco-cellular dot.

♀. *Fore-wing*: hind-margin more convex than in ♂, in some specimens almost elbowed in the centre; orange at apex much narrower than in ♂, forming a curved band, the black borders much broader; usually a faint disco-cellular dot; inner-marginal band broader, shading into discoidal cell, generally united to inner border of apex, on second median nervule, by a black streak, and sometimes continued to meet hind-marginal band at anal angle. *Hind-wing*: similar to ♂; but the black markings all broader and darker; a narrow, indented streak usually connecting extremities of the two parallel bands; an additional hind-marginal spot, on third median nervule; disco-cellular spot usually faintly indicated. UNDER-SIDE.—Similar to ♂, but duller in colouring. *Fore-wing*: apical marking somewhat deeper in tint, in-

wardly bordered by a greyish band; disco-cellular spot almost always *distinct*; inner-marginal band greyish, darker at its extremity, where there is an upward projecting streak. *Hind-wing*: slightly darker than in ♂; costal band indicated by greyish; band beyond middle rather darker; connecting streak but faintly indicated, except on costa.

Woods and their outskirts.

January (e)—February (m). March (Miss Wentworth).

A more thoroughly sylvan insect than *A. Achine*, being found more commonly in pathways and open spots in the woods than on their outskirts. Its flight did not appear to me to be so rapid as *Achine's*, and it flew nearer the ground, and settled more frequently. I only saw this species at Plettenberg Bay, where it was very common in two kloof woods bordering the valley of the little Bitouw river. It has, however, been taken at the Knysna during this year (1860); which is an instance of how little dependence can be placed on the experience of a single season, however carefully and energetically one may work and observe.

Plettenberg Bay.—Coll. mihi.

Knysna.—Coll. Miss Wentworth.

Port Natal.—Coll. S. A. Mus. and Coll. Brit. Mus.

Butterworth, Kaffraria (J. H. Bowker).—Coll. S. A. Mus.

* 32. *Anthocharis Theogone*.

Anthocharis Theogone, *Boisd., Sp. Gen. Lep.*, I, p. 575,
[n. 23.]

Expands 1 in. 10 lin.

♂. *White*; with orange-red apical patch; no trace of longitudinal blackish bands. *Fore-wing*: apical red as in ♂ of *Omphale*, a little more sharply indented by its outer blackish border, its inner border slightly more obliterated a little below costa; base greyish; no disco-cellular dot. *Hind-wing*: base narrowly greyish; a row of blackish spots along hind-margin at extremities of nervules—(obliterated altogether in one specimen, below discoidal nervule). *UNDER-SIDE*.—*Fore-wing*: apical marking dull-orange inwardly, pale-yellow outwardly; a very small disco-cellular dot; base (in one specimen) tinged with pale-yellow. *Hind-wing*: yellowish-white, or pale-yellowish, with a pinkish tinge; curved stripe beyond middle, and mark on costa, as in ♂ of *Omphale*, but much paler in colour; disco-cellular dot distinct, orange, and black-dotted as in *Omphale*; a few, very faint, greyish irrorations along costa, from base.

♀. "Rather less than ♂: bases of wings dusky; red patch paler and narrower; inner-margin of fore-wings blackish, ending in a spot which, as in the allied species, forms the commencement of an arched, sinuate stripe crossing the hind-wings; hind-margin of the latter divided by rather large,

rounded, black spots. UNDER-SIDE of *hind-wings* similar to that of the ♂, but with minute brown irrorations."—*Boisd., Sp. Gen. Lep.*

Open ground.

February.

I have only seen two specimens—both ♂ insects—of *A. Theogone*,—one of my own capturing, the other in the collection of the British Museum. I am inclined to think that this butterfly bears the same relation to *Omphale*, as *A. Antevippe* does to *Achine*. It is so closely similar to *Omphale*, that the total absence of black bands is the only real distinction, though a sufficiently striking one. Boisduval's brief description of the ♀ insect might be taken for one of the ♀ of *Omphale*, as nothing distinctive from that species is mentioned in it. Here again, however, nothing but the actual capture of the united sexes, or rearing them from the Larvæ, can decide the case.

Plettenberg Bay.—Coll. mihi.

Cape of Good Hope.—Coll. Brit. Mus.

33. *Anthocharis Antigone*.

Anthocharis Antigone, *Boisd., MS.*

Expands 1 in. 5 lin.—1 in. 6 lin.

♂. *White*; with orange apical patch. *Fore-wing*: orange at apex *not bordered* with blackish on its *inner edge*, but outwardly with a black border indenting the orange sharply and deeply; a dusky-blackish band along inner-margin, ending beyond middle in a darker spot; no spot at extremity of discoidal cell. *Hind-wing*: a rather broad, dusky-blackish, ill-defined band along hind-margin, more or less intersected with whitish. UNDER-SIDE.—*Fore-wing*: base suffused with sulphur-yellow; apical marking pale-ochreous, inwardly orange-ochreous; spot ending band on inner-margin distinct; a small disco-cellular dot. *Hind-wing*: whitish; disco-cellular spot orange, with a black dot externally; traces of a sinuate, angulated, darker stripe, as in several allied species.

♀. *Fore-wing*: black markings broader and darker; a blackish, transverse streak dividing apical orange patch; base suffused with blackish; disco-cellular spot distinct. *Hind-wing*: slightly tinged with yellowish; an angulated blackish band as in ♀ of *A. Achine*. UNDER-SIDE.—Similar to ♂, but *deeper in tint*. *Fore-wing*: apical patch redder; inner-marginal band more distinct. *Hind-wing*: dull ochreous-yellow, irrorated with grey; angulated band usually well defined.

Var. ♀.—In the collection of the British Museum.—Apical patch *all dusky-blackish*, without a trace of orange. UNDER-SIDE.—*Fore-wing*: broadly suffused from base with sulphur-yellow.

Interior of South Africa. Zoolu. West Africa.—Coll. Brit. Mus.

34. *Anthocharis Delphine*.

Anthocharis Delphine, *Boisd., Sp. Gen. Lep.*, I, p. 577,
[n. 28.]

♂. "*White; with orange apical patch. Fore-wing: orange at apex strongly sinuate internally, rounded and dentate externally, the lower portion of the curve of its inner edge lightly defined with blackish, its outer edge bordered with brown; a small, central (disco-cellular?), black spot. Hind-wing: hind-margin intersected with black marks or spots. UNDER-SIDE.—Fore-wing: a small, central, black spot; apex pale-reddish. Hind-wing: pale-reddish, with a small, central, black and orange spot; a faint indication of a sinuate, transverse, dusky band.*

♀. About the size of ♂. *Fore-wing: orange spot bordered internally by a transverse black stripe, which is sometimes, however, passed by part of the orange; inner-margin sometimes blackish. Hind-wing: traversed by a sinuate, macular, blackish stripe, commencing on inner margin of fore-wing, as in the allied species; hind-margin intersected with black, as in the ♂. UNDER-SIDE.—Similar to ♂, but the reddish markings more ferruginous in tint. Hind-wing: transverse stripe more strongly marked.*"—*Boisd., Sp. Gen. Lep.*, I, p. 577.

An *Anthocharis* labelled as *Delphine*, in the collection of the British Museum, I cannot reconcile with the above description of Dr. Boisduval's, which, as in other instances, for convenience of reference, I have moulded into my usual form of description. There is, however, in the same collection, an *Anthocharis* apparently referable to this species; it seems to be a female, and possesses the distinctive character of the *apical red passing within the internal black edging*, near costa. A Butterfly in my own collection, also, comes nearer to the description of the male of this species than any other; as likewise does a specimen from Natal, in the South African Museum. In both of these, the red passes considerably within the inner black edging, which is reduced to a short black curve from hind-margin, not extending above first median nervule; and there is a blackish band along inner-margin as well as on costa of hind-wing.

An *Anthocharis* in Mr. Andersson's collection approaches very closely to Boisduval's description of the ♂ *Delphine*, but the inner-margin of fore-wing and costa of hindwing are *both banded rather widely* with blackish. The underside of hindwing, too, is yellowish-white instead of pale-reddish, but this is not a difference of any importance.*

* A subsequent examination of a series of specimens in Mr. D'Urban's collection has convinced me that the above-noted individuals of *Anthocharis* are truly referable to *A. Delphine*. The ♂ varies from specimens possessing the very faintest traces of an inner-marginal streak to those as strongly-banded as Mr. Andersson's example. The ♀ specimens are mostly very blackly and broadly banded on both wings. Mr. D'Urban found the insect abundantly "from Port Elizabeth to King William's Town," appearing "from June to August and from October to March."

♂ ? King William's Town (W. S. M. D'Urban).—Coll. mihi.

♂ ? Natal.—Coll. S. A. Mus.

South Africa.—Coll. Brit. Mus.

"Cape of Good Hope."—Boisd.

♂ ? Damaraland.—Coll. C. J. Andersson.

35. *Anthocharis Evanthe*.

Anthocharis Evanthe, *Boisd., Sp. Gen. Lep.*, I, p. 567, n. 13.

„ „ *E. Doubl., App. List Lep. Brit. Mus.*,

[p. 9.

Expands 1 in. 7 lin.—1 in. 9 lin.

♂. *White; with orange apical patch. Fore-wing*: orange at apex bordered externally by a blackish band only *slightly* radiating on the nervules, and internally by an usually rather broad blackish band, ill-defined inwardly, and suddenly interrupted a little below costa; base and costa dusted with grey; a small, more or less distinct, blackish disco-cellular dot. *Hind-wing*: along hind-margin, a more or less marked row of blackish spots at extremities of nervules, not reaching beyond second median nervule. *UNDERSIDE*.—*Fore-wing*: a scarcely perceptible tint of orange in apical marking, which is *irrorated with grey atoms*, and a few thin grey lines; internal blackish band indicated by a greyish tint; grey irrorations from base extending further than on upper-side, almost filling discoidal cell, and extending along costa to apical marking; disco-cellular dot larger and blacker than on upper-side; *very minute* black dots on hind-margin at ends of nervules. *Hind-wing*: of a slightly yellower tint than fore-wing; marked *universally with thin grey lines or hatchings*, lying transversely, and variable in length and size, but never more than a line in length; a black disco-cellular dot; a row of very minute black dots along hind-margin, one at extremity of each nervule.

♀. Unknown.

This *Anthocharis* is of most delicate structure, almost rivalling the Genus *Pontia* in this respect. This character, and the multitudinous short grey lines on its under surface, are sufficient to distinguish it from all the other South African species of the Genus. There is a single specimen of it in the British Museum, which I have noted as from South Africa; but Mr. E. Doubleday in the Appendix to his Museum List of Lepidoptera as quoted above gives Madagascar as the habitat of this specimen. That it is a native of Madagascar, I know, from the fact of three specimens having been taken in that island by Mr. Layard, which are now in the South African Museum. However, I confidently believe that the British Museum example was labelled as from South Africa, or it would never have attracted my attention.

South Africa.—Coll. Brit. Mus.

Madagascar.—Coll. S. A. Mus.

Since the above was written I have discovered the *female* of *A. Evanthe* in the collection of the South African Museum. So different is its appearance on the upper-side to the male insect, and so very delicate its structure, that I had doubtfully referred it to the Genus *Pontia*. But more carefully examining it on one occasion, more recently, I was struck with the resemblance of the under-side to that of the male of *Evanthe* already described. On comparison, I no longer doubted its right to be considered as the same species; and I may add that my friend Mr. E. Layard agrees with me in thinking it *A. Evanthe*. Mr. Layard took the two examples in the Museum on the coast of Madagascar during the same voyage that the ♂ specimens were captured.

Expands 1 in. 4 lin.—1 in. 6 lin.

White; with blackish apical border. Fore-wing: no trace of orange at apex, or of the blackish stripe that borders the orange internally in the ♂, but a simple, rather broad, blackish band, sinuate internally, commencing on costa further beyond middle than in ♂, and ending on hind-margin a little below second median nervule; greyish at base slightly darker; disco-cellular spot larger, black and conspicuous. Hind-wing: base greyish; minute black dots clouded with a minute halo, as it were, of blackish scales, on hind-margin, at extremities of nervules. UNDER-SIDE.—Quite similar to ♂, excepting for the narrower apical marking, untinged with the faint orange hue, and the larger disco-cellular spots. *Hind-wing: a little yellower in tint than in ♂, and perhaps a little more closely irrorated with grey.*

36. *Anthocharis Evarne*.

Pontia Evarne, Klug & Ehrenberg, Symb. Phys., pl. 6,
[f. 1—4.]

Anthocharis Evarne, Boisd., Sp. Gen. Lep., I, p. 569.

„ „ *App. Voy. de Deleg., p. 586.*

„ „ *E. Doubl., App. List Lep. Brit. Mus.,*
[p. 9.]

Expands 1 in. 9 lin.—1 in. 10 lin. (♂)

♂. *Bright pale sulphur-yellow; with orange apical patch. Fore-wing: orange at apex more inclining to yellow than in any of the species already described, occupying nearly half the area of forewing,—bordered externally by a black stripe, widest at apex, slightly indenting the orange, narrowing to lower extremity of orange marking, beneath which (immediately above anal angle) it suddenly widens, forming a blackish spot—and internally by an ill-defined, faint-blackish stripe, variable in width, and sometimes all but obsolete; base blackish; costa edged with black; disco-cellular spot wanting. Hind-wing: a few indistinct faint-blackish spots on hind-margin at extremities of nervules, in some specimens scarcely*

perceivable. UNDER-SIDE.—*Fore-wing*: pale-yellow as above; apical marking *deep-yellow*, with greyish indications of the bordering stripes; in some specimens, a more or less distinct disco-cellular dot; a row of thin black dots along hind-margin, situate *between* the nervules. *Hind-wing*: chrome-yellow; disco-cellular dot always present, sometimes conspicuous; row of thin dots along hind-margin between nervules, as in *fore-wing*.

♀. "*Slightly smaller, almost white. Fore-wing*: a rather large, central, black spot; orange patch smaller, traversed by a macular, sinuate, black band, which is continued across *hind-wing* to disc, or even to anal angle. *Hind-wing*: hind-marginal spots rather large and strongly marked. UNDER-SIDE.—Similarly marked to upper-side, but without orange patch.

"We have seen female specimens in which the orange patch was *very pale and almost obsolete*."—Boisd., *Spécies Général*.

The above description of the female of *A. Evarne* must be qualified by M. Boisduval's subsequent remarks on specimens from Natal. He writes, in his Appendix to M. Delegorgue's travels—"Specimens that we have received from the Amazoulu Country differ remarkably from those brought from Dongola by Ehrenberg, which are in all respects similar to those from Senegal. Our specimens are much larger and both male and female have a very brilliant sulphur-yellow ground colour. The pattern on the wings of the female is also *much more strongly marked* than in the same sex from Senegal and Dongola."

This warmly-tinted species is one of the loveliest of the beautiful Genus to which it belongs. In structure it seems to approach nearer to the European type of the Genus than most of the other African species of *Anthocharis*. It appears to me by no means uncommon in the Natal district, but I have never yet seen the female.

By its bright-yellow,* instead of white, ground-colour it may at once be distinguished from the other South African species of the Genus. The next species, *A. subfasciata*, however, is described as possessing a yellow-tinted surface, but it would seem to be considerably paler than in *Evarne*.

Natal.—Coll. mihi, et Coll. S. A. Mus.

Port Natal.—Coll. Brit. Mus.

"Amazoulu Country, Senegal, Dongola, Arabia.—Boisd.

37. *Anthocharis Keiskamma*.

Anthocharis Keiskamma, D'Urban, in litt. N. Sp.

Expands 1 in. 6 lin.—1 in. 8 lin.

♂. *Bright sulphur-yellow* (deeper than in *A. Evarne*); *with vivid-orange apical patch, shot with pink, occupying*

* *A. Keiskamma*, D'Urban, MS., recently discovered in British Kaffraria, has also a yellow ground-colour, but may at once be recognised by the acute apex to fore-wing, and by the absence of all dark bordering to the orange patch.

about half the area of fore-wing. Fore-wing: apical patch with no internal blackish margin, and externally only *very narrowly* edged with faint-brownish, which extends but very little on either side of apex—the orange reaching nearly to anal angle, and slightly infringing on extremity of discoidal cell; base very narrowly marked with blackish; no disco-cellular spot; costal edge very faintly tinged with pale-brownish; fringe pale reddish-brownish as far as third median nervule, between which and anal angle it is sulphur-yellow. *Hind-wing:* spotless; base very narrowly marked with blackish; fringe sulphur-yellow as far as second or third median nervule—thence, along inner-margin to base, pale russet-brownish. *UNDER-SIDE.*—*Fore-wing:* ground-colour paler than on upper-side; position of apical patch only indicated by a deeper shade of yellow; costa narrowly, apex more widely, tinged with very faint brownish—the apex, in addition, mottled or irrorated with pale-brownish atoms; along hind-margin, a row of minute black dots *between* nervules, and two similar dots on costa immediately before apex. *Hind-wing:* dull, pale, reddish-ochreous (paler on apical half of hind-marginal portion), rather thickly irrorated with brownish atoms; on costa, beyond middle, a faint blackish mark, which, with some much fainter marks between first median nervule and sub-median nervure, indicate an angulated macular stripe across wing; along hind-margin, a row of minute black dots between nervules. *Apex of fore-wing more acute* than in any of the South African species I have seen.

♀. *Ground-colour much paler, sometimes nearly white; orange apical patch paler and duller, with very slight pink gloss. Fore-wing:* a rather large, black, disco-cellular spot; beyond it a curved, transverse row (nearly parallel to hind-margin) of five, good-sized, blackish spots, crossing the orange—the first and second respectively above and below first discoidal nervule,—the third and fourth respectively above and below second median nervule,—the fifth and largest between third median nervule and submedian nervure; base and costa greyish; apical patch margined outwardly with blackish, which slightly indents the orange on nervules, forming a large blackish mark at anal angle, below and touching the orange. *Hind-wing:* along hind-margin a row of large, ill-defined, blackish spots, at extremities of nervules, but not reaching further than extremity of second median nervule. *UNDER-SIDE.*—Similar to that of ♂. *Fore-wing:* white, or very pale yellowish; disco-cellular spot and row of spots as on upper-side, but not so strongly marked; costa

and apex darker than in ♂ —the former faintly irrorated with brown, the latter more widely so than in ♂; hind-marginal dots as in ♂. *Hind-wing*: clearer in tint than in ♂, not so reddish, irrorations darker; a conspicuous, shining-white, disco-cellular dot; a distinct, angulated, brown, transverse stripe or shade, the edges of which are not clearly defined; hind-marginal dots as in ♂, *between* nervules (no trace of the large blackish spots *at ends of* nervules, so conspicuous on upper-side). *Apex of fore-wing more rounded than in ♂*.

In the white specimens of the ♀, the blackish spots on the upper-side are considerably smaller and fainter than as above described.

"Throughout the year."—D'Urban, in litt.

This very beautiful and distinct species of *Anthocharis* was first discovered in British Kaffraria, in the month of September, 1860, by Mr. D'Urban, who has kindly forwarded me specimens of both sexes, from which the foregoing description has been made. The following restricted localities of capture* seem to afford sufficient reason for the name proposed by Mr. D'Urban for this species. "Very abundant at Kingscote, near Bodiam, on the Keiskamma, about five miles from the sea, and as far as the Chalumna."—"At the end of November, at Line Drift on the Keiskamma, I saw this butterfly in the greatest profusion near the river; but only a few stragglers were seen a mile or so beyond, and none anywhere else; though I have just come off a ride of about 120 miles in four days, having visited the following places, viz.: Tamacha, Line Drift, Breakfast Vley, Alice, Middle Drift, and Fort White."—D'Urban, in litt.

38. *Anthocharis subfasciata*.

† *Teracolus subfasciatus*, *Swains., Zool. Illustr.*, 1st Series, [pl. 115.

Anthocharis subfasciata, *Boisd., Sp. Gen. Lep.*, I, p. 567, [n. 12.

"*Pale-yellow; with citron-yellow apical patch. Fore-wing*: very pale citron-yellow; apex more pointed than in most of the other species; a small black dot at extremity of discoidal cell; beyond it a short, oblique, rather broad, black stripe, commencing on costa, and not reaching to (hind?) margin, which is also black, the triangular space, between the stripe and the margin, of a vivid citron-yellow. *Hind-wing*: almost white; *without spots*. *UNDER-SIDE*.—Faintly yellowish white; apex of fore-wing, and also the hind-wing, finely powdered with brown atoms. Discovered by Mr. Burchell,

* Mr. D'Urban has since found the insect abundant in the Fish River Bush, and informs me that Captain Colley, 2nd Queen's, reported its occurring abundantly in a kloof on the T'nimika, a tributary of the Kei.

† I cannot find this species figured in the copy of the "Illustrations" in the Public Library, Cape Town, pl. 115 (vol. II) being a figure of a Brazilian bird, *Platyrynchus cancrumus*.

in the Interior of South Africa.—Described from a female specimen figured by Mr. Swainson.”—*Boisd., Sp. Gen. Lep.*

Of this species I have not seen any example; nor do I know of one existing in any collection. From the description above quoted, it would seem to approach the Genus *Thestias* in arrangement of colouring and marking.

39. *Anthocharis Eris*.

Pontia Eris, *Klug and Ehrenb., Symb. Phys.*, pl. 6, f. 15, 16.

Pieris Eris, *Boisd., Sp. Gen. Lep.*, I, p. 514, n. 11.

„ „ *Doubl., West., Hewits., Gen. Diurn. Lep.*

Anthocharis Eris, *Boisd., App. Voy. de Deleg.*, p. 587.

Pieris Eris, *Chenu, Enc. d'Hist. Nat.—Pap.*, pl. 18, f. 5.

Expands 1 in. 9 lin.—1 in. 11 lin. (♂).

♂. *White*; with *greyish-ochreous, slightly violet-glossed, apical patch*. *Fore-wing*: costa dusted with blackish; ochreous at apex divided into five elongate marks by the brown-clouded nervules, externally bordered by a brown, violet-glossed edging, internally by a black stripe; the latter stripe becomes merged, on first median nervule, with a *glossy, deep-black, inner-marginal band*, widening from base, and becoming very broad and *tending upwards* beyond third median nervule, but extending *quite to anal angle* and lower portion of hind-margin. *Hind-wing*: a duller black band, of considerable width, extends along costa, ending suddenly, *with a concave excavation*, just before apex; small black spots along hind-margin at ends of nervules, as far as second median nervule; blackish clouding from base extending a little into discoidal cell, and between median and submedian nervures. *UNDER-SIDE*.—Whitish, or yellowish-white. *Fore-wing*: apex faintly tinted with *yellow*—both it and inner-marginal band being indicated by a faint-greyish tinge; between first and third median nervules, not far from hind-margin, are two rounded blackish spots (in some specimens a third smaller spot below them, immediately beneath third median nervule). *Hind-wing*: slightly more yellowish than fore-wing; *spotless*; costa edged with chrome-yellow near base.

♀. *Fore-wing*: apical patch less distinct, *without violaceous gloss, tinged with orange-yellow*, its outer margin rusty-brownish, its inner border blackish, macular; the latter stripe continued by two blackish spots to third median nervule, where the lowermost of the two spots almost touches extremity of inner-marginal band, which is much narrower, paler, and shorter than in ♂, leaving anal-angular region wholly white; disco-cellular spot larger, rounder. *Hind-wing*: slightly yellowish; beyond middle, *traces of a black-*

ish, macular, angulated stripe. UNDER-SIDE.—*Fore-wing* : tinged with pale lemon-yellow; apex pale orange-ochreous, bordered inwardly as on *upper-side*, but more faintly; below last blackish spot and third median nervule, a faint-blackish mark defines extremity of inner-marginal band. *Hind-wing* : pale orange-ochreous, a brownish disco-cellular spot; a dark mark on costa, beyond middle, commences an indistinct, transverse, angulated row of brownish spots.

This very striking and peculiar species may be readily recognized by the dull-ochre tint of the apical marking, and the intense blackness of the inner-marginal band. The above description of the ♀ is from a specimen taken at King William's Town by Mrs. Tyrwhitt Drake, now in Mr. D'Urban's collection. M. Boisduval describes the ♀ *Eris* as being sometimes sulphur-yellow. The same author, in his Appendix to M. Delegorgue's "Voyage dans L'Afrique Australe," remarks that specimens he received from Natal do not differ from those found in Nubia and Senegal; and also that it is a somewhat rarer species than *A. Ione*, at Natal.

Natal.—Coll. mihi, et Coll. S. A. Mus.

King William's Town, British Kaffraria.—Coll. W. S. M. D'Urban.

"Natal. Senegal. Nubia. Arabia."—Boisd.

Genus IDMAIS.

Idmais, Boisd.

Mancipium (pars), Horsf.

Pieris, Godt.

IMAGO.—*Head* of moderate size; *antennæ* rather short, ending in a broad, abrupt club; *palpi* short, hairy; *eyes* moderately prominent. *Thorax* of moderate size and thickness. *Fore-wings* more elongate than in *Anthocharis*, but general outline very similar. *Hind-wings* rounded, somewhat truncate, not so large in proportion to the rest of the insect as those of *Anthocharis*. *Abdomen* long and slender, but not extending to anal angle of hind-wings.

This Genus approaches *Anthocharis* in structure, but may be distinguished by the shorter antennæ and palpi, and broader and more abruptly formed club of the former organs. The Genus does not contain many species, and these few are all inhabitants of the warmer regions of the Old World. Only *two* species are recorded from Southern Africa, and of one I can only find the *name* in M. Boisduval's Appendix to Delegorgue's Travels. As he states, however, that the female of his *Idmais Vesta* is figured in the "Genera of Diurnal Lepidoptera," under the name of *Idmais Chrysonome*, Klug., I have thought it advisable to make a description of some specimens bearing the latter name in the Collection of the

British Museum, from one of which, I believe, Mr. Hewitson's figure in the "Genera" was taken.

40. Idmais Calais.

Papilio Calais, *Cram.*, *Pap. Exot.*, pl. 53, f. C, D; and pl. (351, f. A—D.

„ „ *Herbst, Ins.—Schmett.*, V, pl. 108, f. 3—8.

Papilio Amata, *Fab., Ent. Syst.*, III, 1, p. 202, n. 633.

♀. *Papilio Cypræa*, *Fab., Ent. Syst.*, III, 1, p. 202, n. 634.

Pieris Amata, *Godt., Enc. Meth.*, IX, p. 131, n. 39.

Idmais Calais, *Boisd., Sp. Gen. Lep.*, I, p. 587, n. 4.

„ „ *Horsf. & Moore, Cat. Lep. E. I. C Mus.*, p. 67.

Expands 1 in. 6 lin.—1 in. 8 lin.

♂. *Pale, creamy brick-red; with black markings. Fore-wing*: costa broadly banded with black; a large, sub-quadrate, slightly arched, black spot united to the costal band at extremity of discoidal cell; a broad, black band along hind-margin, widest at apex, and containing two rows of spots of the ground-colour, the inner row consisting of larger spots than the outer, which is occasionally obsolete; the creamy-red ground colour becomes gradually paler towards hind-marginal band. *Hind-wing*: a similar hind-marginal band to that of *fore-wing*, and likewise containing two rows of spots, which are frequently indistinct. **UNDER-SIDE.**—*Greenish-yellow. Fore-wing*: Flushed with orange-yellow from base; a black disco-cellular spot; three quadrate black spots form a short transverse row, near anal angle, not far from hind-margin. *Hind-wing*: irrorated with grey specks; sometimes with a disco-cellular, blackish spot.

♀. Markings similar, but *ground-colour yellowish-white, sometimes flushed with creamy-red from base. UNDER-SIDE.*—*Paler; flushed with sulphur-yellow from base. Fore-wing*: disco-cellular spot larger, red-centred; beyond middle, a transverse row of reddish spots joins the black spots near anal angle, which are also tinged with reddish. *Hind-wing*: disco-cellular spot almost wholly pinkish-red; beyond middle, a sinuate row of spots of the same colour, parallel to hind-margin.

This species approaches the Genus *Colias*, *Fab.*, in colour and marking, as is very noticeable when it is compared with *Colias Electra*, *Linn.* It is very widely distributed.

Interior of South Africa. Congo? India.—Coll. Brit. Mus.

Damaraland (H. Hutchinson).—Coll. S. A. Mus.

Ceylon.—Coll. S. A. Mus.

India. Madras.—Coll. E. I. C. Mus.

* 41. Idmais Vesta.

Idmais Vesta, *Boisd., App. Voy. de Deleg.*, p. 588, n. 29.

? ♀. Idmais Chrysonome, *Doubl., Westw., Hewits., Gen.*
[*Diurn. Lep.*, pl. 7, f. 5.

♀. Expands 1 in. 10 lin.

Soft creamy-ochreous; with black markings, and black-clouded nervures. Fore-wing: powdered with white at base; a large, ovate, black, disco-cellular spot; beyond middle, a transverse, W-shaped band of connected black spots, commencing on costa, and ending on inner-margin about middle; on hind-margin, a black band, containing elongate yellow marks between nervules. *Hind-wing*: powdered with white at base, but not so widely as in *fore-wing*; no disco-cellular spot; yellow spots in hind-marginal band indistinct. **UNDERSIDE**.—*Fore-wing*: warm yellow-ochreous; nervures unclouded; costa, apex, and hind-margin, bordered with pale sulphur-yellow; disco-cellular spot distinct; transverse waved band represented by five separate spots; anal angle marked with blackish. *Hind-wing*: pale sulphur-yellow; two transverse waved bands of yellow-ochreous; within and parallel to hind-margin a thin, ochreous, waved streak.

I am unable to state whether M. Boisduval is right in considering the *Idmais* which Mr. Doubleday named as *I. Chrysonome* of Klug to be the female of his *I. Vesta*; not having had an opportunity of seeing Klug's work, and no description being given by M. Boisduval of his new species. The specimens in the British Museum are from Congo; and it is very probable that the insect, whatever be its rightful name, may range over a considerable portion of Southern Africa.

Congo.—Coll. Brit. Mus.

"Amazoulu Country."—Boisd.

Genus ERONIA.

Eronia, *Hübner., Boisd.*

Dryas, *Boisd. (pars).*

IMAGO.—*Head* of moderate size; *eyes* smooth, prominent; *palpi* short, compressed, hairy on their under edge; *antennæ* rather short, thick, with an elongate, gradually-formed, yet stoutish club. *Thorax* ovate, robust, clothed with long, silky pubescence. *Fore-wings* broad, truncate; costa considerably arched; apex more or less acute; hind-margin nearly straight, very slightly concave about its middle portion, and a little dentate; anal angle more or less rounded; inner-margin slightly concave. *Hind-wings* large, rounded, sub-truncate; hind-margin more or less dentate (remarkably so in *E. Leda*); inner-margins produced convexly, and meeting beneath abdomen so as to hide all or most of its under

surface. *Abdomen* elongate, much compressed laterally, not so long as inner margin of hind-wings, clothed with silky pubescence at its base.

This Genus contains three South African species—all fine insects, though very different in appearance. *E. Buquetii* is greenish-white; *E. Cleodora* is white with black borders; while *E. Leda* is sulphur-yellow with orange tips to the fore-wings. I have personal acquaintance with only one of these, *E. Buquetii*; but I have no doubt that its habits are those of others of the Genus. Its flight is singularly swift, though very irregular, and it appears to keep very constantly to the woods. All three species are rather above the middle size, none expanding under 2 inches 2 lines, and *E. Leda* attaining an expanse of $2\frac{3}{4}$ inches.

42. *Eronia Leda*.

Dryas Leda, *Boisd., App. Voy. de Deleg.*, p. 588, n. 30.

Eronia Leda, *Doubl., Westw., & Hewits., Gen. Diurn. Lep.*

Expands 2 in. 2 lin.—2 in. 8 lin.

♂. *Bright sulphur-yellow; with broad, apical, orange blotch on fore-wings. Fore-wing*: orange at apex extending inwardly to extremity of discoidal cell, and commencing on costa above cell a little before its extremity—on hind-margin reaching to third median nervule; apex edged with ferruginous-brown. *Hind-wing*: spotless; slightly paler on inner-margin. *UNDER-SIDE.—Fore-wing*: sulphur-yellow; paler on inner-margin; apical portion rich chrome-yellow, containing, close to apex, two or three ferruginous spots with large, silvery centres; a very small, blackish, disco-cellular dot. *Hind-wing*: the same rich yellow as apex of *fore-wing*, sometimes slightly deeper in tint; thickly flecked with ferruginous, or ferruginous-brown; a row of rather darker spots along costal edge (which is fringed with *pinkish hairs*), the largest and most conspicuous spot being an elongate one, variable in shape, a little beyond middle, touching first subcostal nervule.

♀. *Yellow paler than in ♂. Fore-wing*: the orange apical patch less distinct, *sometimes almost wholly obsolete*; apex and upper half of hind-margin edged with ferruginous-brown, which is not so clearly defined as in ♂; a little within hind-margin, and parallel to it, a row of five ferruginous-brown spots between nervules, the lowest spot indistinct, between second and third median nervules. *Hind-wing*: spotless. *UNDERSIDE.—Forewing*: pale lemon-yellow; beyond discoidal cell orange, deepening into ferruginous-red at apex; a minute disco-cellular spot; spots at

apex larger than in ♂. *Hind-wing*: more thickly flecked than in ♂, the spots and atoms *pink*; the largest spot on costa silvery-centred, and the first of an irregularly interrupted row of from four to six similar spots, of which the two central spots are the largest, parallel to, and not far from, hind-margin. The *under-side* is much subject to variation.

M. Boisduval, in his Appendix to M. Delegorgue's Travels, considers this species as the type of a new Genus (*Dryas*); but Mr. Doubleday, in his notice of the Genus *Eronia* in the "Genera of Diurnal Lepidoptera," states that he can discover no structural distinctions to warrant the separation of *Leda* from the last named Genus. Boisduval considers *Dryas* as a Genus intermediate between *Anthocharis* and *Eronia*. If the bright-orange colouring at the apex of the fore-wings can be considered as indicating a generic affinity to *Anthocharis* no doubt M. Boisduval is right; but this appears to me to be the only mark of resemblance to the insects of the latter Genus to be found in this lovely Butterfly. M. Boisduval further remarks that specimens from Abyssinia are a *third less* in size than those he received from Natal. The insect is one of the most striking of the South African Butterflies, and must be conspicuous on the wing.

Natal.—Coll. mihi, et Coll. S. A. Mus.

Zoolu. Abyssinia.—Coll. Brit. Mus.

"Amazoulu Country. Abyssinia."—Boisd.

43. *Eronia Cleodora*.

Eronia Cleodora, Hübn., *Samml. Exot. Schmett.*

" " Boisd., *Sp. Gen. Lep.*, I, p. 605, n. 1.

" " " *App. Voy. de Deleg.*, p. 588.

" " Chenu, *Enc. d'Hist. Nat.*—Pap., f. 143.

Expands 2 in. 3 lin.—2 in. 9 lin.

♀. *White*; with broad black hind-margins. *Fore-wing*: hind-marginal band widest at apex (where, near costa, are one or two rounded white spots), its inner edge slightly crenelated, and with a conspicuous, broad projection immediately above first median nervule. *Hind-wing*: hind-marginal black band broad, spotless, irregularly dentate on its inner edge, with a large, conspicuous, irregularly-shaped projection, more pointed than that of fore-wing, on second subcostal and discoidal nervules (this projection is occasionally *separate* from the black band, forming a distinct spot). *UNDER-SIDE*.—*Fore-wing*: hind-marginal band blackish, but margined outwardly by a ferruginous, grey-dusted stripe, wide at apex (where it encloses a conspicuous creamy-yellow marking, which has a downward projection), narrowing to, and ending at, extremity of third median nervule. *Hind-wing*: soft creamy-yellow; hind-marginal band ferruginous, varied with silvery-grey,—the inner projection continued to extremity of discoidal cell; also the following spots of the same mingled grey and ferruginous: an elongate mark on

costa about middle, reaching first subcostal nervule; a small, rounded spot in discoidal cell near base, and another close to it, outside cell, below median nervure; a very small disco-cellular spot; and two spots, forming one elongate transverse mark, between second median nervule and submedian nervure, in a line with the large projection from hind-marginal band. Fringe of *fore-wing* brownish both above and below; of *hind-wing*, white above, greyish below.

A *female*, in the collection of the South African Museum, is *pale lemon-yellow* instead of white, with the inner edge of the hind-marginal bands more deeply excavate than usual. On the *under-side*, also, the yellow is deeper and richer than in other specimens, and the ferruginous spots broader.

The following description of the *male Cleodora* is made from two damaged specimens forwarded to me by Mr. D'Urban, the only examples of this sex I have seen.*

♂. *Yellowish-white; the hind-marginal black bands paler and very much narrower than in ♀. Fore-wing:* hind marginal band not reaching to anal angle, diminishing to a point at extremity of submedian nervure (projection on its inner edge much more *acute* than in ♀), in its broadest portion, from costa close to apex, an *irregular, oblique patch* of the ground-colour. *Hind-wing:* hind-marginal band diminishing to a point on submedian nervure, very much narrower than in ♀,—the projection on its inner edge much sharper and narrower. *UNDER-SIDE.*—Quite like that of ♀, excepting the greater narrowness and shortness of the hind-marginal bands: the silvery grey more apparent in the ferruginous markings.

"Abundant over the whole country (British Kaffraria) but flies so fast that I have not been able to take as many as I wanted.—September to June."—*D'Urban, in litt.*

This is a highly beautiful insect, the soft rich colouring of the under surface being especially remarkable. It appears hitherto only to have been found in the Colony of Natal.† M. Boisduval's note on this species, in the Appendix to M. Delegorgue's work, states that *E. Cleodora* is "very common in Mimosa woods."

D'Urban, Natal (R. C. Jones).—Coll. mihi.

Natal.—Coll. S. A. Mus., and Coll. Brit. Mus.

Kingscote, near Bodiam, British Kaffraria.—Coll. W. S. M. D'Urban.

"Bay of Port Natal."—Boisd.

* Mr. J. H. Bowker has also taken a ♂ *Cleodora* in Kaffraria. This specimen is now in the South African Museum.

† Since found in British Kaffraria, by Mr. D'Urban, who also saw it in abundance at the Maitland Mines, near Port Elizabeth.

44. *Eronia Buquetii*.

Callidryas Buquetii, *Boisd., Sp. Gen. Lep.*, I, p. 607, n. 1.

Eronia Buquetii, *Boisd., App. Voy. de Deleg.*, p. 588.

Expands 2 in. 2 lin.—2 in. 5 lin.

♂. *Greenish-white, not lustrous; spotless. Fore-wing*: costa from base tinged with faint reddish-brown; the apex and hind-margin varying from being just edged with a faint brownish tint, scarcely perceptible at all on hind-margin, to possessing a blackish marginal band, two lines in width at apex, and extending to anal angle, gradually narrowing to a point. *Hind-wing*: wholly without marking of any kind. *UNDER-SIDE*.—*Greenish-white, with a shining pinkish gloss. Fore-wing*: costa very narrowly and faintly edged with pale-brownish; apex more glossy than rest of wing, tinted with greenish-yellow, and irrorated with indistinct brownish atoms. *Hind-wing*: all of the same glossy appearance as apex of fore-wing, and indistinctly irrorated; a rather large, pale-ferruginous, white-centred, disco-cellular spot, with a whitish space immediately succeeding it; costa at base tinged with vivid pale-green, which extends more faintly to a little before middle.

♀. Wings more truncate: apex of fore-wing more obtuse. *Whiter than ♂, less greenish; entirely spotless. UNDER-SIDE*.—Slightly more *yellowish*: brownish irrorations more conspicuous. (Described from a single ♀ specimen in Mr. D'Urban's collection.)

Woods.

January (c)—March (m). June, 1861 (D'Urban).

It is worthy of remark that this species, which is of wide distribution on the African continent, appears to have lost the black marginal band of the fore-wing as it extended Southward. Specimens from Sierra Leone have the band conspicuous enough; those found in Congo present it in a much narrower and paler form; while the examples I captured on the South coast presented the faintest and narrowest edging of brown. Three specimens from Natal, in the South African Museum, seem to carry out this peculiarity of variation, for they possess a dusky-brownish apical bordering of moderate width, extending narrowly along hind-margin,—in one specimen almost to anal angle.

Abundant as this insect was at Plettenberg Bay, I never saw a single female specimen. So rapid and erratic is its flight, that I found it almost useless to attempt to capture it on the wing. But, by taking my stand near a blue-clustered mass of *Plumbago Capensis*, in the bright stillness of the noonday heat, I succeeded in taking as many as I wanted of this rapid Butterfly; as they almost invariably, after careering over the trees and open spots, made for the tubular blue flowers, and took a sip of honey before starting off again. Even when the insects have settled, however, the collector must not pause to take aim, but strike the very moment they stop; for *their* pause is the briefest of the brief,—as I very soon discovered. Only one was taken at Knysna during my stay, in a garden close to the

river-lagoon; and I never saw the species in the woods of that immediate neighbourhood. When the insect is alive, the eyes are of a brilliant *green* colour, but this fades into a chestnut-brown soon after death.

Knysna. Plettenberg Bay.—Coll. mihi.

Natal.—Coll. S. A. Mus.

King William's Town.—Coll. W. S. M. D'Urban.*

Sierra Leone. Congo.—Coll. Brit. Mus.

"Amazoulu Country."—Boisd.

* "Occurs from Graham's Town to King William's Town, and beyond."
—D'Urban, in litt.

Genus CALLIDRYAS.

Callidryas, *Boisd.*

Colias, *Godt., Swains.*

IMAGO.—*Head* of moderate size; *eyes* prominent, smooth; *palpi* rather short, compressed, not so hairy as in *Eronia* (being clothed with short smoothly-lying hairs), converging at tips, which are rather acute; *antennæ* rather shorter than in *Eronia*, gradually thickening into an elongate, cylindrical club, truncate at tip. *Thorax* tolerably robust, clothed with long, silky pubescence. *Wings* much as in *Eronia*,—perhaps less broad proportionally, their margins very slightly crenelated; *hind-wings* not so rounded, both apical and anal portions being more prominent, giving these wings a more *truncate* appearance; the inner-margins meeting and generally quite concealing the under surface of abdomen,—forming more of a groove than in *Eronia*.

LARVA.—Elongate; smooth or with short hairs; slightly attenuated at extremities; usually of some shade of green.

PUPA.—Thick in the middle, very acute at both extremities; the head being peculiarly beaked; a projecting ridge on the back of the thorax; the position of the wings prominently indicated. Usually green or yellow.

These characters of the earlier states of the insects of this Genus are taken from figures of the Larvæ and Pupæ of several Indian species in the "Catalogue of the Lepidopterous Insects in the Museum of the Hon. East India Company" (1857).

This Genus, which contains a considerable number of highly beautiful Butterflies, seems to be an essentially *tropical* one, only a few species straying into temperate climates. But *two* species are recorded from extra-tropical South Africa, one of which is *bright-yellow*, and the other *greenish-white*. I have only seen the former of these on the wing; its flight was exceedingly rapid.

45. *Callidryas Florella*.

- Papilio Florella*, *Fab., Syst. Ent.*, p. 479, n. 159.
 „ „ *Herbst., Naturs. Bek. Ins.—Schmett.*, V, [p. 195.
 „ „ *Fab., Ent. Syst.*, III, 1, p. 213, n. 666.
Colias Florella, *Godt., Enc. Meth.*, IX, p. 96, n. 23.
Colias Pyrene, *Swains., Zool. Illustr.*, I, pl. 53.
Papilio Florella, *Don., Nat. Repos.*, III, pl. 90.
Callidryas Florella, *Boisd., Sp. Gen. Lep.*, I, p. 608, n. 2.
 „ „ *Voy. de Deleg.—App.*, p. 588.

Expands 2 in. 6 lin.—2 in. 9 lin (♂).

♂. *Greenish-white*. *Fore-wing*: a small, black, disco-cellular spot; apex faintly edged with brown. *Hind-wing*: spotless. *UNDER-SIDE*.—*Fore-wing*: greenish-white on inner-marginal portion; the rest of wing glossy greyish-yellow sprinkled thickly with ferruginous dots; a reddish, pale-centred, disco-cellular spot. *Hind-wing*: wholly glossy greyish-yellow, sprinkled thickly with reddish dots; disco-cellular spot similar to that on fore-wing, but smaller.

♀. “A little *smaller*. *Fore-wing*: less sinuate; a dentate, blackish band along the whole of the hind-margin, preceded near apex by a short sinuate band of the same colour, confused or partly mingled with it, so that the marginal band appears broader, and divided at the apex by spots of the ground-colour; the disco-cellular spot rather large, rounded, deep-black. *Hind-wing*: often with a narrow, interrupted, faint-blackish border. *UNDER-SIDE*.—Differs from that of ♂,—the atoms irrorating it *more conspicuous*. *Hind-wing*: usually three small, reddish, whitish-pupilled, disco-cellular spots, one of which is in the discoidal cell; the curved row of spots preceding these, externally, always tolerably distinct.”—*Boisd., Sp. Gen. Lep.*

Having only seen males of this species, I am obliged to borrow the above description of the *female* from M. Boisduval's work. A worn *Callidryas* taken at the Knysna some years ago, appears to be referable to the ♂ of this species; but I never saw the insect in that locality. Mr. Swainson has figured both sexes of *Florella*, under the name of *Colias Pyrene*, and states male and female to be *precisely similar*.* The specimens he has figured he mentions as having been brought from the Interior of South Africa by Mr. Burchell.

* A ♀ of *Florella* in Mr. D'Urban's collection confirms Mr. Swainson's statement, being identical in colour and marking with the ♂. Two specimens of the *latter* sex, in the same collection, are remarkable for a fold on upper-side of fore-wing, from base to middle of inner-margin, from which radiate numerous, long, silky-white hairs.

Interior of South Africa. Sierra Leone. St. Vincent (Cape Verd Islands).—Coll. Brit. Mus.

King William's Town (Mrs. Drake).—Coll. W. D'Urban).

Knysna.—Coll. mihi—(? *Florella*).

"Bay of Port Natal." "Senegal. Guinea Coast."—Boisd.

"Somauli-land, East Africa."—Felder, Lep. Fragm.

46. *Callidryas Rhadia*.

Callidryas Rhadia, *Boisd.*, *Sp. Gen. Lep.*, I, p. 617, n. 11.

" " " " *App. Voy. de Deleg.*, p. 588.

Callidryas Castalia, *Doubl.*, *Westw.*, *Hewits.*, *Gen. Diurn.*
[*Lep.*]

Expands 2 in. 3 lin.—2 in. 10 lin. (♀).

♂. "Habit and size of *Drya*. Upper surface without spots, as in the ♂ of *Eubule*. [The ♂ of *Eubule* is sulphur-yellow, without spots, and has on hind-margin minute ferruginous dots at extremities of nervules.] UNDER-SIDE.—*Citron-yellow*. Fore-wing: at extremity of discoidal cell a transverse, brick-red mark, intersected by two thin, yellow nervures. Hind-wing: a silvery disco-cellular spot, circled with red; succeeded by several indistinct, ferruginous dots, disposed in the form of a transverse band, and sometimes scarcely visible."—*Boisd.*, *Sp. Gen. Lep.*

♀. *Sulphur-yellow*. Fore-wing: a round, black, disco-cellular spot; an indistinct, curved row of ferruginous spots from costa near apex; on hind-margin, a row of rather large, united, ferruginous spots, forming a narrow border, dentate on its inner edge. Hind-wing: no spot at extremity of discoidal cell; on hind-margin, a row of small, ferruginous dots at extremities of nervules. UNDER-SIDE.—*Rich ochreous yellow*, inclining to orange, irrorated with ferruginous dots or lines. Fore-wing: much paler on inner-marginal portion, which is not irrorated; a dusky-blackish, disco-cellular spot, centred with *pale-violet*; an indistinct trace of the reddish band from costa near apex; on hind-margin, a series of ferruginous dots at extremities of nervules. Hind-wing: three silvery spots in ferruginous rings form one disco-cellular marking; beyond which is a row of more or less distinct ferruginous spots parallel to hind-margin; at extremities of nervules, a row of ferruginous spots along hind-margin.

I once saw this beautiful Butterfly at Knysna, on the 11th of March, 1859, flying rapidly over the marshes near the river. I chased it for some time, but, when close upon it, by an unlucky fall gave the insect time for so long a start, that it was useless to try further pursuit. An aged specimen of the female, from the same locality was given me by a lady who took it there some years ago. The insect is conspicuous in flight, owing to its

bright-yellow colour. I do not know what led Mr. Doubleday to consider this species as identical with the Fabrician *Papilio Castalia*, of which latter I translate the description in "Entomologia Systematica."

"Wings entire, rounded, white, unspotted above; beneath, yellowish at base."—*Ent. Syst.*, III, 1, p. 188, n. 580.

"Rare; November and April."—D'Urban.

Knysna.—Coll. mihi (♀).

Butterworth, Kaffraria (J. H. Bowker, 1861).—Coll. S. A. Mus. (♀).

Graham's Town. King William's Town.—Coll. W. S. M. D'Urban.

"Bay of Port Natal."—Boisd.

Senegal. Sierra Leone. Ashanti. Mauritius.—Coll. Brit. Mus. (♀s).

Genus COLIAS.

Colias, *Fab.*

Eurymus, *Swains.*

Pieris, *Latreille.*

IMAGO.—*Head* of moderate size; *eyes* naked, moderately prominent; *palpi* compressed, slender, slightly divergent at tips, clothed beneath with fine hair (more hairy than in *Callidryas*); *antennæ* rather short, stout, with a gradually-formed, truncate club, but more distinctly knobbed than in *Callidryas*. *Thorax* densely clothed with silky hair. *Forewings* somewhat elongate, truncate; costa nearly straight after the first upward curve from base; apex rather pointed, but not sharply so; hind-margin very slightly convex; anal angle rather acute; inner-margin almost straight. *Hindwings* subovate, rather truncate, more rounded than in *Callidryas*; hind-margin very slightly dentate. *Abdomen* of moderate length, slender.

LARVA.—Similar to that of *Callidryas*; usually green, with pale lines along the sides.

PUPA.—"Keeled, or ridged, above; without lateral angles, not curved, terminating anteriorly in a point."—*Chenu, Enc. d'Hist. Nat.—Papillons*, p. 58.

This Genus is not a large one, but consists of several very closely allied species, in some instances very difficult to distinguish. I have only found a single species in the Colony, and until recently was not aware that any other species inhabited the South of Africa. Mr. Layard, however, informs me that specimens of *Colias Hyale*, Linn., in the South African Museum, were most certainly taken in South Africa; and further, that he himself took this species close to Cape Town in 1855, soon after his arrival in the Colony. That

this insect is widely distributed is well known;—it having been found as far Eastward as Northern India, being abundant on the Continent of Europe, and having also been found in North Africa.

47. *Colias Electra*.

Papilio Electra, *Linn., Syst. Nat.*, II, p. 764, n. 101.

Papilio Hyale, *Cram., Pap. Exot.*, pl. 351, f. E.—H.

Var. ♀.—*Papilio Palæno*, *Cram., Pap. Exot.*, pl. 340,
[f. A, B.

Colias Electra, *Godt, Enc. Meth.*, IX, p. 102, n. 39.

„ „ *Boisd., Sp. Gen. Lep.*, I, p. 637, n. 8.

„ „ „ *App. Voy. de Deleg.*, p. 588.

Expands 1 in. 6 lin.—2 in. 5 lin.

♂. *Deep chrome-yellow inclining to orange*, glossed with a *pink lustre* in certain lights; with *broad black bands on hind-margins*. *Fore-wing*: base blackish; an ovate, rather narrow, black spot at extremity of discoidal cell; hind-marginal band broadest at apex, irregularly dentate on its internal edge, dusted with pale yellow scales, some of the nervules crossing it being also pale-yellow. *Hind-wing*: base blackish, extending along median and submedian nervures; costa and inner-margin pale yellowish-green; a large, rounded, deep-orange, disco-cellular spot; hind-marginal black band *narrower than in fore-wing*, irregularly dentate on its inner edge, gradually diminishing as far as third median nervule, where it ends; a clothing of pale-yellow hairs on the dusky portion of wing near base and inner-margin. *UNDER-SIDE*.—*Fore-wing*: pale ochreous-yellow, almost cream-colour on inner-margin; costa from base, and broad hind-marginal band, of a lighter or darker *greenish-yellow*; disco-cellular spot black and conspicuous; along inner edge of hind-marginal band, and marking its separation from the yellow ground-colour, is a row of sub-triangular, dusky-blackish spots, commencing on costa (*in the hind-marginal band*) with some ferruginous-blackish, often half-obsolete spots, but below first median nervule, where the band narrows, marking its internal edge. *Hind-wing*: wholly of the same greenish-yellow as band of *fore-wing*: disco-cellular spot bright-silvery, in a ferruginous ring, usually with a smaller, similar, but duller spot touching its upper edge; near hind-margin, and parallel to it (as if continuous of the transverse row in *fore-wing*), a row of seven more or less conspicuous, ferruginous spots, commencing with a rather larger spot on costa, and extending to immediately above submedian nervure.

♀. Ground-colour much the same as in ♂, sometimes *rather darker*, the pink lustre *much fainter* than in ♂; *hind-marginal bands spotted with yellow*. *Fore-wing*: base blacker than in ♂, shading off into dusky-greenish, which extends along costa to hind-marginal band, and to before middle of inner-margin; disco-cellular spot rounder and usually rather larger; hind-marginal band usually rather broader and blacker than in ♂, containing six or seven *sulphur-yellow spots*; five of which form a curved row near apex, from costa to first median nervule (the first three of these are elongate, the two others rounded); another, always present, between second and third median nervules; and the seventh spot, generally indistinct, and often wanting, immediately below third median nervule. *Hind-wing*: wholly suffused with dusky-greenish; disco-cellular orange spot more conspicuous than in ♂; hind-marginal black band not so dark as in fore-wing, not well-defined on its inner edge, in some specimens extending almost to submedian nervure, in others only to second median nervule, often spotless, but sometimes containing on its inner side from three to five pale-yellow spots (those nearer anal angle becoming merged with the ground-colour). *UNDER-SIDE*.—Usually *somewhat deeper in colour* than that of ♂, but similarly marked. *Fore-wing*: ochreous-yellow ground-colour darker, not paler on inner-margin. *Hind-wing*: transverse row of ferruginous spots not so conspicuous. In both sexes, down on forehead and front of thorax, antennæ, legs, and costal edges of a *reddish-pink* colour; fringes varied with pink above, wholly pink beneath.

Var. ♀ (figured by Cramer).—Orange-yellow ground-colour *replaced by greyish-white*. *Fore-wing*: dusky-grey suffusion from base forms a conspicuous basal patch, abruptly ending a little before extremity of discoidal cell; disco-cellular spot often much larger than in ordinary specimens; spots in hind-marginal band conspicuous from their *whiteness*. *Hind-wing*: the whole or greater part suffused with grey; disco-cellular spot whitish, centred with yellowish; hind-marginal spots in band whitish, variable in distinctness. *UNDER-SIDE*.—*Fore-wing*: basal portion, costa to beyond middle, and all but apical portion of hind-marginal band, *bluish-grey*; apical portion of band dull greenish-yellow, or yellowish-green; black spots as in ordinary specimens. *Hind-wing*: marked as usual; but of the same dull mixture of yellow and green as apical colouring of fore-wing. Antennæ, legs, margins, and fringes, *pink* as in the common examples.

Second Var. ♀.—A specimen of this sex taken by me

near Cape Town forms an interesting link between the extreme pale-coloured variety just described and the ordinary richly-coloured specimens. The ground-colour is of a *dull, pale-ochreous yellow* nearly approaching the ground-colour of the under-side of the fore-wing of ♂; with the basal grey patch of fore-wing as strongly marked and defined as in the whitish variety. The *under-side*, though paler and duller than in ordinary ♀ specimens, and with the basal grey colouring visible, approaches nearer to the usual tints than to the peculiar colouring of the white variety.

Meadows, gardens, hill-sides, and open ground generally.

Throughout the year.

The right of this insect to be considered as a distinct species from the European *Colias Edusa*, Linn. Sp., is a very doubtful one; though, as may be seen, several authors have advocated it. After a careful comparison of European and South African examples, the only differences I could perceive in the latter were a *deeper orange ground-colour*, and *the lustre of pink over the surface* mentioned in the above description. The latter indeed would scarcely seem to be a distinction; for, if I recollect aright, Mr. H. T. Stainton, one of the first English Lepidopterists, mentioned to me that he had observed this lustre on specimens from Continental Europe. Were *C. Edusa* a Butterfly of limited range, and one not subject to variety, specimens from a far distant locality, even though differing but slightly, might afford some excuse for the foundation of a distinct species; but, it being recognised as an inhabitant of the whole of Europe (including England); of Nepaul, Cachemre, and other portions of Northern India, and also of Siberia, in Asia; of North Africa; and of a portion of North America;—I cannot perceive that a South African locality should affect the identity of species in examples so closely resembling the recognised *C. Edusa* as those in question. The fact, also, of the ♀ of the South African *Colias* being subject to precisely the same pale variation as the same sex of *Edusa*, considerably strengthens my belief in its identity of species with the latter.

The Larva of the *C. Edusa* is described by Mr. Westwood as “green, with a lateral stripe varied with white and yellow, and with an orange dot on each segment.”* It feeds on leguminous plants, and should be searched for on such in the Colony; as the discovery of the Larva of the so-called *C. Electra* would probably decide the question of its claim to be considered as a good species.

Colias Electra is a widely-spread and very common species in Southern Africa, and will certainly be taken by the collector as soon as he begins to form a collection of Butterflies. The pale variety of the female is not rare; but, at the same time, a considerable time may elapse before it is met with.

Cape Town. Knysna. Plettenberg Bay.—Coll. mihi.

King William's Town.—Coll. W. S. M. D'Urban.†

Cape of Good Hope. Butterworth, Kaffraria (J. H. Bowker).—Coll. S. A. Mus. [Brit. Mus.

Cape of Good Hope. Interior of South Africa.—Coll.

“Bay of Port Natal.”—Boisd., App. Voy. de Deleg.

* “British Butterflies, and their Transformations,” p. 15.

† “Port Elizabeth. Graham's Town to Queen's Town.—Very abundant.”—D'Urban, in litt.

48. *Colias Hyale*.

Papilio Hyale, *Linn., Syst. Nat.*, II, p. 764, n. 100.

„ „ *Fab., Syst. Ent.*, p. 477, n. 148.

„ „ „ *Ent. Syst.*, III, 1, p. 207.

Papilio Palæno, *Herbst, Nat. Bek. Ins.—Schmett.*, V,
[pl. 114, f. 7, 8.

„ „ *Hübner, Europ. Schmett.*, f. 438, 439.

Pieris Hyale, *Latr., Gen. Crust. et Ins.*, XIV, p. 113.

Colias Hyale, *Ochs., Schmett. von Europa*, IV, p. 32.

„ „ *Godt., Enc. Meth.*, IX, p. 33.

„ „ *Boisd., Sp. Gen. Lep.*, I, p. 650.

„ „ *Duncan, Brit. Butt.*, pl. 6, f. 1, 1.

„ „ *Doubl., List. Lep. Brit. Mus.*, 1, p. 147.

„ „ *Chenu, Enc. d'Hist. Nat.—Pap.*, p. 59,
[f. 147.

„ „ *Staint., Man. Brit. Butt. and Moths*, p. 17.

„ „ *Horsf. & Moore, Cat. Lep. E. I. C. Mus.*,
[p. 62, n. 108.

Expands 1 in. 10 lin.—2 in. 2 lin.

♂. *Pale sulphur-yellow; with dusky-blackish hind-marginal borders. Fore-wing: dusky-grey at base; costa dusted with grey; hind-marginal band broad at apex, divided by spots of the ground-colour arranged as in the ♀ Electra, but not so clearly defined, being more contiguous,—the spot between second and third median nervules usually connected with the ground-colour, in consequence of the inner portion of the blackish band becoming obsolete on, or just above, third median nervule; disco-cellular spot large and black, as in the ♀ Electra. Hind-wing: base blackish-grey, but remainder of wing not clouded as in Electra; disco-cellular spot large and conspicuous, orange-yellow; hind-margin faintly and irregularly bordered with blackish, with, in some specimens, traces of an inner stripe, forming with the outer border indications of a broad band enclosing yellow spots. UNDER-SIDE.—Marked very similarly to C. Electra. Fore-wing: pale-yellow, as on upper-side; disco-cellular spot usually with a paler centre; apical portion of wing lighter or darker chrome-yellow; transverse row of ferruginous and blackish spots not so dark as in C. Electra. Hind-wing: ochreous-yellow mingled with greyish; a large, and a small, silvery disco-cellular spot, touching each other, surrounded by distinct ferruginous rings, well-defined on their outer edge; a transverse row of ferruginous spots near hind-margin, arranged as in Electra. Antennæ, legs, and edges of wings rose-pink.*

♀. Closely resembles ♂ in marking; *but much paler, varying from yellowish, to almost pure, white*; the blackish hind-marginal band on fore-wing sometimes rather broader. *Pink cilia, &c., as in ♂.*

LARVA.—“*Velvety-green, with two lateral yellow stripes, and with black dots on the segments. Feeds on various species of Trifolium and other leguminous plants.*”*

PUPA.—“*Green, with a yellow lateral line.*”*

While the above description of this Butterfly was in progress, I saw an insect which I feel almost sure was this species flying through a street in Cape Town. In England, this species is known to be most uncertain in its appearance, being taken abundantly during some one season, and then for several years remaining undiscovered, without any apparent cause to account for its disappearance. It is, therefore, possible that the same uncertainty of appearance may characterise *Colias Hyale* in the South of Africa, which would be a sufficient reason for my not having taken it. Mr. Layard informs me that specimens of this insect were in all the three collections made in South Africa by Ecklon, Zeyher, and Drege.

South Africa.—Coll. S. A. Mus.

Sussex Coast, England.—Coll. mihi.

“Continent of Europe. Siberia. Cachemere. Nepaul. North Africa.”—*Westw., Brit. Butt.*

Genus TERIAS.

Terias, Swains.

Xanthidia, Boisd.

Pieris, Godt.

IMAGO.—*Head* rather small; *eyes* prominent, naked; *palpi* very short, clothed with closely-fitting hair beneath, compressed, scarcely projecting beyond forehead, which has two short tufts of hair immediately below insertion of antennæ; *antennæ* slender, moderately long, ending in a compressed, elongate, rather gradually-formed club. *Thorax* short, rather slender, clothed with short hair. *Wings* large, of delicate texture. *Fore-wings* rather elongate, truncate; costa strongly arched at base; apex not acute; hind-margin more or less convex; anal angle more or less rounded; inner-margin slightly concave about middle. *Hind-wings* sub-ovate, truncate; costa much arched from base; apical portion of wing produced, but rounded; anal angle rather marked; inner-margins meeting beneath abdomen, forming a slight groove or channel. *Abdomen* long, slender, extending very nearly to anal angles of hind-wings.

LARVA.—Elongate; slightly attenuated towards head, clothed with a short pubescence.

* Westwood (Brit. Butt. and their Transf., p. 16).

PUPA.—Sharply pointed at extremities; the central portion very deep, owing to the projection of the position of the wings, as in *Callidryas*.

These characters of Larva and Pupa are descriptive of the figures of those of *Terias Hecabe*, Linn. Sp., in Pl. I of Horsfield and Moore's "Catalogue."

It is not without considerable doubt, nor without a long and careful comparison of the few well-authenticated South African specimens to which I have access, that I record four species of *Terias* as inhabitants of that portion of Africa whose Butterflies I am engaged in describing. One, indeed (*T. Brigitta*, Cram.), is only given on the authority of M. Boisduval, who states that M. Delegorgue took it in the "Pays des Amazoulus."* The Genus is a large one, consisting of tropical and sub-tropical species from both the Old and New World.

As is usually the case in large Genera, many of the species of *Terias* are very closely allied, and the specific distinctions of authors are often not to be relied on. These Butterflies are very beautiful insects, with long slender bodies and large delicate wings; they are usually of some bright tint of yellow,—some, however, being white,—with black borders to the wings. Their flight is said to be slow, which might naturally be inferred from their structure.

49. *Terias Rahel*.

Papilio Rahel, *Fab., Ent. Syst.*, III, 1, p. 204, n. 637.

Pieris Rahel, *Godt., Enc. Meth.*, IX, p. 136, n. 55.

Terias Rahel, *Boisd., Sp. Gen. Lep.*, I, p. 673, n. 34.

Expands 1 in. 5 lin.—1 in. 8 lin. (♂).

♂. *Bright chrome-yellow*, of variable depth and brightness; *with strongly-marked black borders to both wings*. *Fore-wing*: base powdered with blackish: a black border from base along costa gradually widening to apex, where it is very broad, and thence narrowing to anal angle, where it is about 1 line in breadth, the inner edge of its hind-marginal portion slightly scalloped, forming small projections on nervules. *Hind-wing*: blackish at base and along submedian nervure to a little before middle; a black band along hind-margin, widest in apical portion—(but even there very slightly broader than the anal-angular portion of band in fore-wing)—and gradually diminishing to anal angle, where it ends in a point. **UNDERSIDE.**—*Citron-yellow*. *Fore-wing*: at extremity of discoidal cell, a

* Subsequent captures have proved this insect to be not uncommon on the Eastern Frontier.

narrow blackish line including the yellow disco-cellular nervule, occasionally almost obsolete; the broad border of upper-side indicated by a greenish tint, irrorated with blackish atoms; in some specimens an indistinct, blackish, oblique stria near apex; small black dots at extremities of nervules; inner-marginal portion of wing paler than the rest. *Hind-wing*: more or less irrorated with blackish atoms; four or five blackish dots, sometimes yellow-centred, near base; an indistinct, blackish line, like that in fore-wing, at extremity of discoidal cell; beyond middle two or three faint-blackish, interrupted, transverse streaks, (often scarcely perceptible),—the first on costa, only reaching sub-costal nervule; the second, interrupted on median nervules, almost crossing the whole wing; the third, on median nervules; black dots on hind-margin as in *fore-wing*.

Mr. D'Urban, who has taken this species commonly at King William's Town, sends me the following short description of the ♀ *T. Rahel*, captured *in copulâ* with the ♂, on Windvogelberg.

"Female somewhat larger than the male. Upper and under-side *pale primrose-yellow covered with minute blackish atoms*. Black border of the wings not so intense. Otherwise as in the male, with the exception that the black dots, &c., on the under-side are still more faint: the fringe of the wings, also, is paler."

This description is not sufficiently minute to enable me to determine whether the female specimens in the South African Museum, which I have temporarily referred to *T. pulchella*, Boisd., are not really females of *Terias Rahel*; but, as far as it goes, it is certainly applicable to the specimens in question.

Natal.—Coll. mihi, and Coll. S. A. Mus.

Port Elizabeth. Graham's Town. King William's Town.

—Coll. W. S. M. D'Urban.

Butterworth, Kaffraria (J. H. Bowker).—Coll. S. A. Mus.

Interior of South Africa. Natal. Sierra Leone. Ashanti.

Congo.—Coll. Brit. Mus.

Damaraland.—Coll. C. J. Andersson.

50. *Terias pulchella*.

Xanthidia pulchella, Boisd., *Faune Ent. de Mad.*, Bourb.

[*et Maur.*, pl. 2, f. 7.

Terias pulchella, Boisd., *Sp. Gen. Lep.*, I, p. 677, n. 39.

" " *E. Doubl.*, *App. List Lep. Brit. Mus.*, p. 11.

Expands 1 in. 2 lin. (♂)

♂. *Gamboge-yellow; with broad, black borders to the wings.*

Fore-wing: base strongly powdered with black; black border commencing at base, continued along costa with little differ-

ence in its width, and joining the *very broad* apical and hind-marginal band rather abruptly. *Hind-wing*: powdered with black at base; black band on hind-margin nearly as broad as that of fore-wing (very much broader than in *T. Rakel*), diminishing to a point at anal angle. UNDER-SIDE.—“Yellow; with a marginal series of little black dots. *Fore-wing*: three very small black dots in the discoidal cell; three or four brown dots along costa. *Hind-wing*: very finely powdered with blackish; two or three waved striæ of blackish-grey more or less clearly defined.”

♀. “*Sulphur-yellow*; powdered with blackish, especially near base. *Fore-wing*: the marginal band not continued along costa. *Hind-wing*: the marginal band often scarcely indicated.”—*Boisd. F. E. de Mad.*, &c., pp. 20, 21.

I think that three specimens of a *Terias* in the collection of the South African Museum may be considered as females of this species.* They expand from 1 in. 4 lin.—1 in. 6 lin. M. Boisduval's description of the ♀ is so very brief that it is impossible to speak positively on the subject. In the specimens referred to, the band on fore-wing is dull-blackish, and commences on costa before the middle; it is interrupted on hind-margin just above anal angle, but there is a blackish mark *at* anal angle. The band on hind-wing, though present in all three specimens, and rather broad, only extends as far as extremity of second median nervule—its inner edge is irregularly dentate. The under-side is closely and finely irrorated with blackish, particularly the hind-wing, which presents the waved blackish bands mentioned in the description of the ♂ by M. Boisduval. When engaged in making descriptions of the South African Rhopalocera in the British Museum, I did not notice this species as one found within the limits of the region South of the Tropic. Mr. E. Doubleday, however, in the Appendix to his List of Lepidoptera in the British Museum notes a specimen of *Pulchella* from Port Natal; and Drege, in his “Price List” of South African Insects, mentions *Xanthidia pulchella* as one of those he had collected. The description of the *upper-side* of the ♂, given above, is from the figure in plate 2 of the “Faune de Madagascar, &c.,” Boisduval's description being too general to be of any service without the figure. I think it probable that *T. Pulchella* will prove to be a *variety* of *T. Rakel*.

Madagascar. Port Natal.—Coll. Brit. Mus.

“Madagascar. St. Marie.”—*Boisd.*

51. *Terias Desjardinsii*.

Xanthidia Desjardinsii, *Boisd.*, *Faune Ent. de Mad.*, &c.,
[pl. 2, f. 6.]

Expands 1 in. 4 lin.—1 in. 9 lin. (♂).

♂. *Gamboge-yellow*; with narrow black margins. *Fore-wing*: on costa, not far from base, commences a narrow black edging, gradually increasing to a border $1\frac{1}{2}$ lines wide

* An examination of Mr. D'Urban's specimens has since shown me that these three ♀ examples are *T. Rakel*, not *T. pulchella*.

at apex, and continued more narrowly to anal angle, where it again slightly widens,—its inner edge forming very slight denticulations on the nervules. *Hind-wing*: *sub-angulated*, there being a slight projection of outline on second median nervule; yellow much paler on inner-margin; a narrow, black, hind-marginal edging, considerably dentate on its inner edge, diminishing to a point at extremity of third median nervule or submedian nervure. *UNDER-SIDE*.—*Sulphur-yellow*. *Fore-wing*: tinged with pale-ferruginous at apex, which colour diminishes along hind-margin to a point at anal angle; a streak of darker-ferruginous, slightly waved, beginning near costa just before apex, touches first median nervule; a blackish, yellow-centred mark at extremity of discoidal cell; and a small, very faint, blackish dot *within* cell, not far from base; yellow much paler on inner margin. *Hind-wing*: not irrorated; marked as in *T. Rahel*, but with *ferruginous* instead of blackish; a very narrow, pale-ferruginous line along hind-margin; a minute black dot at extremity of each nervule.

? ♀. Expands 1 in. 6 lin.—1 in. 7 lin.

Pale sulphur-yellow; irrorated with blackish. *Fore-wing*: irrorations darkest and thickest near base and along costa; bordering blackish, much broader than in ♂ at apex and along hind-margin, not so sharply defined on its inner edge. *Hind-wing*: less irrorated than fore-wing,—principally so at base and central portion; inner-marginal portion very pale, not irrorated; hind-marginal band blackish, ill-defined, forming dentations on nervules (in one specimen being little more than nervular markings, just touching at their extreme points), not extending beyond third median nervule; projection of outline at extremity of second median nervule *rounder* than in ♂, but quite distinct. *UNDER-SIDE*.—*Much paler than in ♂*; the markings similar, but indistinct, and more greyish. *Fore-wing*: minute dots at extremities of nervules distinct; in one specimen the ferruginous hind-marginal edging is entirely wanting.

The sub-angulated outline of the hind-wings of two female specimens of *Terias* from Natal first induced me to separate them from other specimens which I have mentioned above as supposed females of *T. pulchella*, Boisd. The male of *T. Desjardinsii* possesses this peculiarity, and noticing the markings of the underside in these female specimens to be very similar to those of the male of the last-named species, I give a description of them, as a suggestion to those who may have an opportunity of investigating the matter. Dr. Boisduval states that he was not acquainted with the ♀ of this insect.

♂. Madagascar.—Coll. S. A. Mus.

“Madagascar.”—Boisd.

? ♀. Natal.—Coll. mihi, and Coll. S. A. Mus.

52. *Terias* Brigitta.

Papilio Brigitta, *Cram., Pap. Exot.*, pl. 331, f. B, C.

” ” *Herbst., Ins.—Schmett.*, V, pl. 106, f. 6, 7.

Pieris Brigitta, *Godt., Enc. Meth.*, IX, p. 195, n. 53.

Terias Brigitta, *Boisd., Sp. Gen. Lep.*, I, p. 676, n. 38.

” ” ” *App. Voy. de Deleg.*, p. 588.

♂. “Entirely of the habit of *T. Drona**, but a little smaller; of a more brilliant yellow, without blackish atoms towards base. *Fore-wing*: border a little wider at apex and along costa, a little narrower at anal angle, less denticulated on its inner edge. *Hind-wing*: border narrower, scarcely denticulated internally, disappearing a little before anal angle. Fringe of all the wings rosy or reddish-yellow. **UNDER-SIDE**.—Almost like that of *T. Drona*: transverse band waved, a little more ferruginous; at extremity of discoidal cell in both wings, a small elliptical lunule, in place of two blackish dots.”—*Boisd., Sp. Gen. Lep.*

♀. Expands 1 in. 10 lin.

Bright chrome-yellow. *Fore-wing*: costa dusted with some blackish scales for a little distance, thence black edged, increasing into a broad, black, apical band, which diminishes in width (rather abruptly) to third median nervule on hind-margin, where it is interrupted; a black spot at extremity of sub-median nervure showing the full extent of the band; on costa, near apex, three rather conspicuous yellow dashes indenting the black. *Hind-wing*: a row of blackish spots at extremities of nervules, diminishing in size towards anal angle, the last (very small) spot being on third median nervule. **UNDER-SIDE**.—*Fore-wing*: ground-colour paler than above; the marginal band of upper-side indicated by an orange-yellow tint, dusted with thinly-scattered blackish atoms; a thin, blackish streak, enclosing the yellow nervules, at extremity of discoidal cell; a transverse, faint-blackish streak from costa near apex, extending to second median nervule; a black dot at extremity of each nervule, from first subcostal nervule to submedian nervure. *Hind-wing*: wholly of the same tint of yellow as margins of fore-wing, and similarly irrorated; markings similar to those in other species, but more ferruginous in tint, and not so sinuate or irregular as in some others; spots near base well marked, yellow centred; disco-cellular streak as in *fore-wing*. Fringes yellow, tinged with pink above.

* An Indian and Javanese species.

The above description of the ♀ insect is that of a specimen taken in Damaraland by Mr. C. J. Andersson, which quite accords with M. Boisduval's description and with Cramer's figure, excepting that the black border on hind-margin, with the interruption mentioned, extends to anal angle. I give the species as an inhabitant of Africa South of the Tropic on the authority of M. Boisduval, who includes it in his list of Lepidoptera collected by M. Delegorgue. In his "Spécies Général," the same author remarks that *T. Brigitta* is "probably only a local variety of *T. Drona*." The whole Genus *Terias*, presenting so many very closely-allied forms, demands the careful investigation of entomologists.

"Amazoulu Country, Senegal."—*Boisd.*

♀. Damaraland.—Coll. C. J. Andersson.

Since the above was written, Mr. J. H. Bowker has forwarded to the South African Museum a ♀ specimen of *T. Brigitta*, taken in Kaffraria,—so that there is no longer any doubt as to its being really an extra-tropical South African species. In Mr. Bowker's specimen, the band bordering *fore-wing* quite agrees with Cramer's figure,—the spot at extremity of submedian nervure being small and inconspicuous.

♀. Butterworth, Kaffraria (J. H. Bowker).—Coll. S. A. Mus.

In the same collection as the female specimen just mentioned, and from the same locality, Mr. Bowker forwarded two *male Terias*, which I have little doubt are true *Brigitta*, as they accord with the brief description I have quoted from Boisduval's "Spécies Général," with the exception of possessing blackish atoms at base of *fore-wing*. I add the following description of these specimens

♂. Expands 1 in. 8 lin.—1 in. 9 lin.

Bright gamboge-yellow. Fore-wing: base dusted with blackish; on costa, close to base, some blackish atoms, rapidly darkening into a narrow black border, which gradually widens to apical portion, where it is nearly as broad as in *T. Rahel*, and whence it narrows to anal angle,—*interrupted*, however, by the yellow ground-colour between third median nervule and submedian nervure; the yellow interrupting portion dusted with blackish; three minute yellowish streaks indenting the border on costa near apex. *Hind-wing:* the black border on hind-margin much narrower than in *Rahel*, (in one specimen very narrow, and simply *macular* beyond discoidal nervule), not extending beyond third median nervule. **UNDERSIDE.**—Quite like that of the ♀ *Brigitta*; but the orange-yellow colouring of both wings considerably paler, the irrorations more scattered, and the spots near base of hind-wing not ocellated. Fringes yellow, pink-tinged above and below.*

* Mr. D'Urban has taken both sexes of *T. Brigitta*, and gives me the following note of the species: "Graham's Town and King William's Town; February and April. Common." G

FAMILY 3.—DANAIDÆ.

DANAIDÆ, *E. Doubl.*DANAIDES, *Boisd.*DANAITES, *Blanch.*NYMPHALIDÆ, (*pars*), *Swains.*

IMAGO.—*Head* rather broad : *eyes* oval, prominent, naked; *palpi* short, divergent, clothed with hair beneath, rising but little above forehead; *antennæ* rather thick, of moderate length, terminating in an elongate, gradually-formed club. *Thorax* sub-ovate, rather narrow, but of considerable depth, clothed on the back with hair, which is longest at the junction of abdomen. *Fore-wings* elongate, being more or less produced in the apical portion; discoidal cell *closed*; the first discoidal nervule united to subcostal nervure; costa very slightly curved, almost straight; apex more or less rounded; hind-margin more or less concave (owing to the apical projection), slightly denticulate; anal angle rounded, but in some species rather prominent; inner-margin somewhat waved, being convex for a greater or less distance from base, and then more or less excavate or concave. *Hind-wings* obovate, somewhat truncate, large; discoidal cell *closed*; costa almost straight; hind-margin more or less dentate; inner-margins long, almost straight, meeting at base of abdomen, forming rather marked anal angles with the hind-margins. *Legs* rather long and stout, the tibiæ spined at their extremities; first pair of legs short, imperfect, never used in walking, hairy, closely appressed to thorax. *Abdomen* elongate, thickened towards extremity, nearly as long as inner-margins of hind-wings.

LARVA.—Tolerably stout, cylindrical, somewhat attenuated towards head, smooth; possessing one or more pairs of long, fleshy, slender filaments on the anterior segments, and one shorter pair of similar organs on the last segment but one.

PUPA.—Short, stout, rounded, smooth; somewhat constricted at junction of thorax and abdomen; often marked with golden spots and lines; *suspended by the tail only*.

This Family of Butterflies is looked upon by many authors, and I think with much reason, as a Sub-family forming with many others the great group of the NYMPHALIDÆ, which Mr. Doubleday has restricted so as to comprise only the most typical forms of the division. Most entomologists are, however, agreed that the *Danaidæ* should stand first among the great assemblage of "four-legged" Butterflies, as being the nearest among them to the *Papilionidæ*. Though restricted in Genera, a large number of species,

chiefly tropical and oriental, are known: but from South Africa I can only discover that four species, belonging to two Genera, have been recorded. These are insects above the middle size, no specimen of either of the four species that I have seen expanding under 2 inches 9 lines. While in the *Pieridæ* the typical arrangement of colouring consists of a light ground-colour with dark spots and borders, in the *Danaidæ* it is just the reverse,—ochreous and white markings contrasting with velvety-brown and black ground-colours.* The flight of the species of this Family is usually rather slow, but it can be considerably quickened when occasion demands. The Genera represented in South Africa are *Euplœa* and *Danais*; of which the former comprises but one, the latter three, species.

Genus E U P L Œ A.

Euplœa, Fab.

IMAGO.—*Antennæ* rather long (longer than in *Danais*), and with the club rather more gradually formed. *Fore-wings* elongate, but not so markedly produced in apical portion as those of *Danais*; costa a little more arched; hind-margin scarcely concave in its central portion; inner-margin slightly concave about middle, convex near base. *Hind-wings* large, rounded; hind-margin very slightly dentate. *Head and thorax white-dotted*.

LARVA.—Three pairs of tentacles on the anterior segments of the body; one pair on the penultimate segment.

PUPA.—Smooth, rounded, constricted as described above (under *Danaidæ*).

Only one species of *Euplœa* is known as South African; others so mentioned belonging more strictly to *Danais*. It is a sombre-coloured, dark-brown Butterfly, differing strikingly from the brilliantly-gilded Chrysalis that it emerges from.

53. *Euplœa Goudotii*.

Euplœa Goudotii, Boisd., *Faune Ent. de Mad. Bourb. et*
[*Maur.*, pl. 3, f. 2.]

Expands 3 in. 6 lin.—3 in. 7 lin.

Dark-brown; becoming paler towards hind-margins. *Fore-wing*: a whitish spot on costa beyond middle, just above extremity of discoidal cell; a similar spot a little beyond and

* The species of *Idea*—*Hestia* of some authors—form an exception to this statement. None, however, are found in South Africa.

below extremity of cell. *Hind-wing*: along hind-margin, a row of whitish spots, commencing at anal angle, and becoming obsolete at some distance from apex. **UNDERSIDE**.—*Rather paler* than upperside. *Fore-wing*: a bluish-white spot in discoidal cell near its extremity; and, a little beyond cell, a curved row of five similar spots, commencing on costa,—the lowest dot being on a line with median nervure. *Hind-wing*: dot in discoidal cell, and curved row of five dots beyond it, arranged as in *fore-wing*, but the first of the curved row is at some little distance from costa; hind-marginal spots *more conspicuous* than on upperside

LARVA.—"Mouse-grey, with eight fleshy, filiform processes, —of which two very long ones are near the head, two are on the last segment, and the remaining two pairs situate between the first pair and the last, on the segments of the back. Some blue dots on the sides of the body.

Found commonly in June on Oleanders (*Nerium*)."

PUPA.—"Resembles a golden bubble, extremely brilliant; the Imago is disclosed on the fifteenth day."—Boisd., Faune de Mad., &c., p. 36.

South Africa. Zoolu.—Coll. Brit. Mus.

"Bourbon.—Found very commonly."—Boisd.

Genus DANAIS.

Danais, *Latr.*

Euplœa (pars), *Boisd.*, *Hüb.*

Amauris (pars), *Hüb.*

IMAGO.—*Antennæ* moderately long, distinctly though gradually clavate. *Fore-wings* markedly produced at apex into a rounded projection, making the hind-marginal outline considerably concave. *Hind-wings* less rounded than in *Euplœa*, the anal angle being much more acute. *Abdomen* almost of equal thickness throughout.

LARVA.—A pair of long filamentous organs on the third segment; a similar pair of shorter ones on the twelfth segment; sometimes a third pair on the sixth segment.

PUPA.—Short, thick, smooth, ornamented with golden dots.

The insects of this genus, like the *Euplœæ*, have the head and thorax spotted with white. The three South African species are very easily distinguished by their colouring, though the arrangement of markings is very similar in all. *D. Chrysippus* is of a dull red-ochre, with white spotted, black borders. *D. Echeria* and *D. Ochlea* are both black in ground-colour, but the latter may at once be known by the

large size and semi-transparent whiteness of its markings, which in the former are more or less ochreous in tint, particularly in the hind-wing. I have never seen *D. Chrysippus* in woods, though it is fond of marshy spots immediately skirting a wood; while, on the contrary, I never saw *D. Echeria* in any locality but woods and copses. *D. Ochlea* is probably a forest Butterfly.

54. *Danais Ochlea*.

Euplœa Ochlea, *Boisd., App. Voy. de Deleg.*, p. 589.

Expands 3 in.—3 in. 1 lin.

Black; with a large, semi-transparent, white patch in both wings, and smaller, similar, marginal white spots. Fore-wing: a little before middle a large, obliquely-lying, irregularly-ovate, white patch, divided into three portions by the median nervure and its third nervule, its upper edge touching subcostal before middle, its lower edge touching submedian nervure considerably beyond middle; at extremity of discoidal cell, but *above* subcostal nervure, a small white spot; further on, in the same line, is a similar small spot, the first of an oblique apical row of three spots (of which the second is large, elongate, divided into three portions by the crossing nervules,—the third of moderate size, round, close to hind-margin); near apex and costa, a white dot; two similar dots close to hind-margin, one below second, the other below third median nervule; fringe varied with white. *Hind-wing:* a very large white patch, of a sub-rhomboidal form, and divided into ten portions of unequal shape and size by the crossing nervures, occupies the greater part of wing,—leaving a triangular black space at base, it extends along costa (with a narrow black edging) to a little beyond middle,—thence, trending towards hind-margin, reaches its outermost point between discoidal nervule and first median nervule,—narrowing to inner-margin, where it is of a more dusky white, and not so clearly defined on its edges; on hind-margin, not far from its edge two or three white dots, the lowermost one immediately beneath first median nervule; fringe spotted with white. *UNDER-SIDE.*—Larger white markings similar to those of *upper-side*; *apical portion of fore-wing, and broad hind-marginal portion of hind-wing, glossy ochreous-brown. Fore-wing:* two white dots close to apex; in middle portion of hind-marginal edge a row of five small white dots. *Hind-wing:* several additional white dots in hind-marginal row of spots, the lowermost dot being between third median nervule and sub-median nervure; an outer row of white dots, arranged in pairs between nervules along the whole hind-

marginal edge; a conspicuous white spot on costa at base, which is pitchy-black. Fringes of both wings white-spotted. On the upper-side of hind-wing, on either side of submedian nervure, is a conspicuous, smooth space, near anal angle, about one-third of the whole length of the wing. Its appearance seems to be due to a different arrangement, or partial denudation of scales.

This is a very handsome and conspicuous Butterfly. It is allied to *D. Echeria*.

Natal.—Coll. S. A. Mus. et Coll. C. W. Hewitson, Esq.

“Bay of Port Natal. Zanzibar.”—Boisd.

55. *Danais Echeria*.

Papilio Echeria, *Stoll, Suppl. Cram., Pap. Exot.*, pl. 29,
[f. 2, 2 b.

Amauris Echeria, *Hübner, Verz. Bek. Schmett.*, p. 14, n. 68.

Danais Vaillantiana, *Godt., Enc. Meth.*, IX, p. 183, n. 25.

Euploea Echeria, *Boisd., App. Voy. de Deleg.*, p. 589.

Expands 2 in. 9 lin.—3 in. 2 lin.

Deep velvety-black; with pale ochrey-yellow and white spots.
Fore-wing: in discoidal cell, a little beyond its middle, a narrow, elongate, irregularly shaped, oblique, yellow spot; below cell, and in a line with the last-named spot (but a little beyond it), between second and third median nervules, a conspicuous, oval, large spot,—the largest on the wing; at extremity of cell, but above sub-costal nervure, a small yellow spot; a little beyond, and in a line with it, close to costa, a yellow dot is the first of a row of four spots, obliquely crossing apical portion of wing to near hind-margin, of which the second and third are the largest, and somewhat quadrate in form, and the fourth is near hind-margin, immediately beneath first median nervule; two small, white spots near apex, that nearest costa being often split into two by the third sub-costal nervule; near hind-margin, a small yellow spot beneath second median nervule, and another similar spot below third median nervule; in some specimens, on hind-margin about middle, and more rarely near apex, a few, minute, yellow or white dots; fringe narrow, white dotted. *Hind-wing*; on costa, about middle, commences a yellow band, which at first extends to extremity of discoidal cell, whence it abruptly turns almost at right angles, and in a suddenly much broadened form, to inner-margin, of which it occupies the greater portion,—it is divided into *nine* unequal portions by the nervures crossing it; near hind-margin a row of yellow spots parallel to it, varying from three to nine in number; on submedian nervure, near anal angle (in many specimens) a smooth, shining

space occupies either side of it, but not to such an extent as in *D. Ochlea*. UNDER-SIDE.—Very similar in marking, *but paler than upper-side*. *Fore-wing*: spots close to costa, and near hind-margin, *white*; row of white dots along hind-margin clearly defined and numerous, arranged in pairs between nervules,—two pairs between third median nervule and submedian nervule; apical portion of wing tinted *dark-brown*. *Hind-wing*: *glossed with brown*, particularly in hind-marginal portion; two conspicuous white spots at base, close to thorax; inner and outer row of hind-marginal spots both white and conspicuous, arranged in pairs between nervules,—between third median nervule and submedian nervule there are three spots in the inner row, and four in the outer. *Fringes* of both wings white-dotted.

A variety occurs, in which *all the spots in fore-wing are pure white*, and in which the under-side is much paler, the apex of fore-wing and ground-colour of hind-wing being conspicuously *pale-brown*. M. Boisduval notices this in his Appendix to M. Delegorgue's Travels, stating that the Natal specimens differ in this respect from Stoll's figures. Three *Echeria* from Natal, in the South African Museum, possess the peculiar colouring mentioned; and I took a single specimen of the same variety at Knysna.

Woods and copses. Frequent where it occurs.

October (b)—January (m). Again in March.

The flight of this handsome insect is more graceful and floating than that of any other South African Butterfly I have seen on the wing. At the Knysna, where it was common in the woods, it was one of the earliest on the wing of the forest Butterflies; and very pleasant it was to stand quietly in some dewy open and watch *Echeria* take her gentle flight through the cool air. On a warm, still day, this species will keep at a considerable elevation, floating across an open spot, flapping its wings twice or thrice; and then, quietly pitching on some projecting twig, remain motionless, generally with the wings closed and hanging downwards. On a windy day they fly lower, and settle more frequently, when they are usually not difficult to capture. When pursuing, or being chased by, one of its fellows, this species can considerably increase its rate of flight; and the collector, when he has thoroughly alarmed *Echeria*, will often be suddenly deprived of her company by the unlooked for rapidity of her retreat. This is the Butterfly mentioned in my notes on *Papilio Cenea*, Stoll, as being so curiously similar to the latter species in colour and arrangement of marking. This likeness will strike any one when he compares the two species; it is also well shown on Stoll's pl. 29, where both insects are figured. The singular smooth patch of scales on the upper-side of the hind-wings, mentioned in my description, is said by Mr. Doubleday (in the "Genera of Diurnal Lepidoptera") to be peculiar to the *males* of the African group of the Genus *Danaïs*. If this be the case, the female of this species must very rarely fly, as I have only found *one*, amongst the numerous Knysna specimens of *D. Echeria* that I captured, without the peculiarity in question. In common with *D. Chrysippus* and many of the *Acraeæ*, so elastic is the thorax of this Butterfly, that numerous

pinches often fail in depriving it of life, or even inducing it to cease flapping its wings. I never saw the insect in the woods of Plettenberg Bay, though only 23 miles from Knysna.

Knysna.—Coll. mihi.

Natal.—Coll. S. A. Mus.

South Africa. Port Natal.—Coll. Brit. Mus.

“Bay of Port Natal.”—Boisd.

56. *Danais Chrysippus*.

Papilio Chrysippus, *Linn., Syst. Nat.*, II, p. 767, n. 119.

“ “ “ *Mus. Lud. Ulr. Reg.* p. 263, n. 82.

“ “ *Fab., Syst. Ent.*, p. 482, n. 172.

“ “ *Cram., Pap. Exot.*, pl. 118, f. B, C.

“ “ *Herbst, Naturs. Bek. Ins.—Schmett.*,
[VII, pl. 155, f. 1, 2.

“ “ *Fab., Ent. Syst.*, III, 1, p. 50, n. 154.

Euploea Chrysippe, *Hübner, Verz. Bek. Schmett.*, p. 15, n. 81.

Danais Chrysippe, *Godt., Enc. Meth.*, IX, p. 187, n. 38.

Danais Chrysippus, *Boisd., Faune Ent. de Mad., Bourb., et*
[*Maur.*, p. 35.

“ “ *Doubl., List. Lep. Brit. Mus.*, I, p. 51.

“ “ *Horsf. and Moorc, Cat. Lep. E. I. C.*
[*Mus.*, I, p. 126.

Expands 2 in. 8 lin.—3 in. 5 lin.

Dull red-ochre; with white-spotted black margins. Fore-wing: costa with a narrow black edging as far as extremity of discoidal cell, where the black suddenly widens, covering apical portion of wing, and narrowing again to anal angle,—the inner edge of the black is irregularly excavate; on costa, before middle, almost invariably an elongate, small, white mark; followed, a little further on, by a similar, rather larger mark, immediately above extremity of discoidal cell, where there is generally a small, rounded white spot; beyond these, an oblique row of six more or less closely-connected, somewhat quadrate, white spots, extends from costa to bend of hind-margin, meeting a hind-marginal row of from four to six small white spots, situate close to hind-margin's edge, about its middle; two white spots at apex, the outer one close to commencement of hind-margin; above these two spots, and a little before them, are sometimes two minute white dots; almost always a rounded white spot between first and second median nervules, close to the junction of red and black; and between the same nervules, immediately beneath the sixth spot of the oblique row, a similar, rather smaller spot; fringe conspicuously black and white chequered. *Hind-wing:* rather paler than fore-wing; three ill-defined

black spots on upper-side of discoidal cell,—the largest spot occupying extremity of cell; on costa, beyond middle, a narrow blackish mark, relieved with white on either side, connected by a black line with a moderately broad, inwardly much excavate, black, hind-marginal border, sometimes containing a few white dots near anal angle, more rarely a few near apex, sometimes wholly spotless;—in some specimens, apparently ♂s, on third median nervule, near its junction with the nervure, a rounded, puckered, black *sac*, slightly raised above the plane surface of the wing; *fringe* as in fore-wing. **UNDER-SIDE.**—White markings generally like those on upper-side; *apex of fore-wing* (beyond oblique white band), and *whole of hind-wing*, soft, creamy, ochre-yellow. *Fore-wing*: red darker than on upper-side near costa, paler near inner-margin; black colouring within the oblique white band as on upper-side; a hind-marginal, narrow black band from apex, containing a conspicuous outer row of white spots throughout, and an inner row of smaller spots only bordering the apical yellow. *Hind-wing*: base black, containing three white spots; nervures and black markings all relieved by a white, or whitish edging; costal spot broader than on upper-side, with a conspicuous, white, black-tipped spot on each side of it; before it, on costa, a narrower, less conspicuous, but similar, black and white marking; hind-marginal band marked throughout with large and conspicuous white spots, arranged in pairs between nervules; spots bordering discoidal cell larger and blacker than on upper-side; sac on third median nervule conspicuous when present, being *centred with white*. *Fringes* of both wings as on upper-side.

A *variety* of this species occurs in which the *apical black* is *obliterated*, and that on margins faint and blurred. Except on the fringes of the wings, and a few white spots on costa, *the white markings also are obsolete*, the position of the oblique apical row being barely indicated. On the under-side, the same peculiarities prevail in the *fore-wing*, where, however, the white markings are more distinct; the hind-wing is marked as in ordinary specimens. The whole colouring is paler than usual.

LARVA.—Very pale bluish-grey; with transverse black streaks. From the third to the twelfth segment (both inclusive), is a bright chrome-yellow band on the back, edged with black on both sides, and generally divided into two by a short black line connecting the black edgings; spiracular line chrome-yellow; face and legs striped bluish-grey and black; from the back of the third, sixth, and twelfth segments, respectively, springs a pair of black, elastic filaments,

crimson at their base,—the pair on the third segment longer than the others. Feeds on *Asclepias*. From $1\frac{1}{2}$ to $1\frac{3}{4}$ inches in length.*

PUPA.—Thick, rounded, semi-transparent, dull pinkish-white, the abdominal segments greenish; a raised golden spot on each eye, at the insertion of the wings, and about the centre of costal edge of wings; also two similar spots on each side of the back of the thorax. On the fourth ring of the abdomen is an interrupted, blackish, tuberculated, ridge, immediately succeeded by a row of golden dots. Imago emerged on the fourteenth day after the suspension of the Chrysalis.

The above descriptions of the Larva and Pupa of *D. Chrysippus* are from specimens I found at the Knysna, at the end of December, 1858.

Figures of both Larva and Pupa are in Horsfield and Moore's "Catalogue of Lepidoptera in the East India Company's Museum" (pl. 4, f. 7, 7a).

This Butterfly is an abundant and widely-spread species, extending from South Europe to the Cape of Good Hope, and from West Africa to China. It partakes of the peculiar floating flight of the group, but flaps the wings much more frequently than *D. Echeria*. When pursued, it flies with considerable rapidity.

Marshes, waste ground, kloofs in hill sides, gardens, &c.

November (m)—May (m). "December to July."—D'Urban.

Cape Town. Knysna. Plettenberg Bay. St. Helena.—Coll. mihi.

King William's Town.—Coll. W. S. M. D'Urban.

Butterworth, Kaffraria.—Coll. J. H. Bowker.

Natal. Ceylon. Madagascar.—Coll. S. A. Mus.

Damaraland.—Coll. H. Hutchinson.

Congo. Mauritius. Greece (Athens). Turkey. India. Java. Hongkong. Penang. Ceram.—Coll. Brit. Mus.

"Java. Darjeeling. Madras."—Coll. E. I. C. Mus.

"Bourbon. Mauritius. Madagascar."—Boisd.

FAMILY 4.—**ACRÆIDÆ.**

ACRÆIDÆ, *E. Doubl.*

ACRÆIDES, *Boisd.*

NYMPHALIDÆ (pars), *Swains.*

IMAGO.—*Head* rather broad: *eyes* naked, rather prominent; *palpi* rather long, divergent, rising considerably above

* "Feeds on *Gomphocarpus fruticosus*."—D'Urban, *in litt.*

† "Occurs from Graham's Town to Queen's Town."—*Id.*

forehead, densely hairy beneath, and compressed laterally; *antennæ* rather long and stout, with a more or less abrupt, flattened club. *Thorax* compressed, narrow, ovate, more or less pubescent. *Fore-wings* elongate: costa almost straight, being only slightly convex at base; apex more or less rounded; hind-margin in general more or less convex, but when the apical portion is more produced than in the generality of species, its central portion is concave; anal angle more or less rounded; inner-margin almost straight. *Hind-wings* sub-ovate, somewhat truncate; costa, though convex at base, remarkably straight throughout to apex, which is slightly rounded; hind-margin tolerably convex, entire; anal angle scarcely marked, being much rounded off; inner-margins rather convex, sometimes almost touching beneath base of abdomen. Discoidal cell *closed in both wings*. *Legs* stout, rather short; the first pair imperfect, short, hairy, appressed to thorax, not used in walking. *Abdomen* elongate, often much arched, generally as long as inner-margin of hind-wings, and often extending *considerably beyond anal angle*,—thickened more or less at its extremity, where, in the ♀, there is commonly a peculiar, corneous appendage.

LARVA.—“Cylindric, spiny.”—E. Doubl.

PUPA.—“Slender, angulated.”—E. Doubl.

The *Acraeidae* are a group of peculiar-looking Butterflies; and, a single species having been seen, are very readily recognised by the collector. The length of body and fore-wings, the abruptly-clubbed antennæ, and upward-turning, divergent palpi, are marked structural characters. As regards colouring, the prominent arrangement consists of an ochrey-yellow, brick-red, or pale-brown ground-colour, with black spots and borderings. In some species, however, a dark ground-colour prevails, of brown or black, with pale yellowish or white patches. All are more or less thinly covered with scales, and some are peculiarly transparent. The Family is essentially an African one; thirty-five of the forty-six species, enumerated by Mr. Doubleday in the “Genera of Diurnal Lepidoptera,” being from Africa and its islands. Of the remaining eleven therein catalogued, two are Asiatic, eight American, and one species from Australia. I have found fifteen species recorded from Africa South of the Tropic of Capricorn, and I have little doubt that more remain to be discovered. All these are comprised in the single Genus *Acraea*, first proposed by Fabricius; though *A. Amazonula*, Boisd., ought perhaps to be considered as forming a distinct sub-genus, proposed by its describer as *Alæna*.

Genus A C R Æ A .

Acræa, *Fab.**Telchinia*, *Hüb.*

This Genus, being the only one in the Family, is sufficiently characterised by the particulars of structure given above. With regard to the early states of these Butterflies, figures of the Larva and Pupa of *Acræa Violæ*, *Fab.*, in Pl. 5 of Horsfield and Moore's Catalogue, agree with the very brief characters, given by Mr. Doubleday in the "Genera," that I have quoted above; the *Larva* being rather short, of apparently almost equal thickness throughout, and possessing branched spines on each segment; while the *Pupa* is slender, with a long abdomen, rather wide and angulated about the insertion of the wings, and suspended by the *tail only*. The fifteen South African species are all known to inhabit Natal, except *A. Dice*, Drury, which, however, is probably also to be found there. My personal acquaintance among the *Acrææ* is limited to *A. Horta*, *Linn.*, and *A. Rahira*, *Boisd.*, the only species that, to my knowledge, are found in the Western Province of the Colony. Their flight is slow and flapping, and both may be very easily captured. From the accounts of those who have taken other species of the Genus, this flight appears to be common to all the *Acrææ*. I am not acquainted with the Caterpillars or Chrysalides of a single African species;* and any information concerning them will be most acceptable. I know of no Genus of Butterflies of which the species are more closely allied; and this necessarily, in the absence of all knowledge of the Larvæ, makes the task of distinction and description of the several species a matter of no slight labour and uncertainty. I do not, therefore, pretend to consider the species hereafter described as *all* firmly established, but have done my best to describe all those at present held as species, from the South of Africa.

57. *Acræa Horta*.

Papilio Horta, *Linn.*, *Syst. Nat.*, II, p. 755, n. 54.

" " " *Mus. Lud. Ulr. Reg.*, p. 234, n. 53.

" " *Fab.*, *Syst. Ent.*, p. 459, n. 69.

" " *Drury*, *Ill. Nat. Hist.*, III, pl. 28, f. 1, 2.

" " *Wulfen.*, *Capens. Insect.*, p. 31, n. 29.

* Since the above was written, I have reared numerous specimens of *A. Horta*, *Linn.*, from Larvæ discovered by Mr. C. A. Fairbridge, of Rondebosch, near Cape Town, and also from Larvæ subsequently taken by myself. For description of these *vide* p. 93.

Papilio Horta, *Cram., Pap. Exot.*, pl. 298, f. F. G.

„ „ *Herbst, Bek. Ins.—Schmett.*, V, pl. 83,
[f. 1, 2.

„ „ *Fab., Ent. Syst.*, III, 1, p. 159, n. 491.

Telchinia Horta, *Hüb., Verz. Bek. Schmett.*, p. 27.

Acræa Horta, *Godt., Enc. Meth.*, IX, p. 231, n. 1.

„ „ *Boisd., App. Voy. de Deleg.*, p. 591.

Expands 2 in.—2 in. 8 lin.

♂. *Semi-transparent ; brick-red, with black spots.* *Fore-wing* : base suffused with black ; the red colouring ceasing abruptly a little beyond extremity of discoidal cell ; the apical portion of the wing being of a transparent ashy-grey ; an irregular black streak at extremity of discoidal cell ; in some specimens, a more or less distinct black spot in cell, near its extremity ; occasionally a small blackish spot beneath cell, between second and third median nervules ; more rarely a further small spot nearer base, a little below median nervure ; along hind-margin, between nervules, a row of more or less conspicuous brick-red, somewhat triangular spots. *Hind-wing* : wholly brick-red ; from twelve to fifteen rounded black spots, variable in size, scattered irregularly over the surface to beyond middle ; hind-margin black, intersected with spots between the nervules, which are sometimes pale-yellowish, but often very slightly paler than the ground-colour—(many of them are united to the ground-colour, the line of black bordering them inwardly being generally more or less obliterated in one or more places). **UNDER-SIDE.**—*Fore-wing* : similar, but much paler in tints. *Hind-wing* : *pale creamy-yellowish* ; the black spots very conspicuous, those near base more separate than on upper-side, owing to the absence of the black suffusion ; a brick-red patch at base, close to costa ; and a margin of the same colour running round wing from apex to anal angle, and thence to base ; hind-marginal band more perfect than on upper-side, the yellowish spots in it round and conspicuous.

♀. *Faint ochrey-reddish, sometimes dingy pale-ochreous.* *Fore-wing* : markings similar, but in the paler specimens almost bereft of colour, and very transparent. *Hind-wing* : black spots similarly arranged ; in the redder specimens often a blackish suffusion beyond the extremity of discoidal cell, but not reaching hind-marginal band ; in the latter the spots are usually conspicuous from their pale-yellowish tint. **UNDER-SIDE.**—Quite similar to that of ♂, but *paler*.

LARVA.—About $1\frac{1}{4}$ in. long ; with strong branched spines. *Dull brownish-ochreous, closely striped with black transverse streaks* : the incisions of segments and a line down the back

pale-ochreous; a broad ochreous band, *not* crossed by the black streaks, on each side, above the legs, which are of a bright shining yellow; head shining-black. On the second segment are two, and on the last four, black, branched spines; on each of all the other segments, six similar spines. Feeds on *Kiggelaria Africana*, a tree not uncommon about Cape Town.*

December—February.

PUPA.—About $\frac{3}{4}$ in. long, rather slender; head blunt, hardly bifid; lateral angles at bases of wing-covers prominent and acute; back of thorax not ridged, rather blunt and rounded; abdomen considerably elongate, curved inwardly towards its extremity. *Pale-creamy, with a tinge of ochreous*: wing-covers streaked with black *along the positions of the nervures*; two curved black streaks from eyes to angles at bases of wings; two black, short, longitudinal streaks on back of thorax; a transverse black streak at junction of thorax and abdomen; on each side of the back, a row of large, united, black, ochre-yellow-centred spots; each row united by thin, black lines to a row of similar spots below it, on side of abdomen; a shorter row of similar, more contiguous spots along middle of under-side of abdomen.

Attached to stems and leaves of plants, palings, walls, &c. The silk to which the tail is attached often covers an area of an inch in diameter. The Butterfly emerged, in most instances, eight or nine days after the disclosure of the Pupa.

Gardens and meadows. Abundant, but local.

Throughout the year. Not common, however, in May and June.

The insect is common in and near Cape Town, and may often be seen in the streets, playing about some tree or bush in front of the houses. I found it in great plenty at Claremont and Wynberg, near the town, flying in rough, low-lying fields. They usually fly but slowly, with a half-floating yet frequently flapping motion, but sometimes pursue each other upwards to a considerable height. When settled, they continually open and shut their wings; and they may frequently be taken with the fingers. Their deep-red colouring makes them conspicuous on the wing. At the Knysna, I saw specimens that had been captured there; but never took the species myself in that district, nor even saw it on the wing.

Cape Town.—Coll. mihi.

King William's Town, British Kaffraria.—Coll. W. S. M. D'Urban.†

South Africa.—Coll. S. A. Mus.

Butterworth, Kaffraria.—Coll. J. H. Bowker.

South Africa. Sierra Leone.—Coll. Brit. Mus.

"Port Natal."—Boisd.

* "On *Passiflora cærulea*, March."—D'Urban, *in litt.*

† "Graham's Town to King William's Town, and Izeli Mts."—*Id.*

58. *Acræa* Dice.

Papilio Dice, *Drury, Illustr. Nat. Hist.*, III, pl. 18, f. 3, 4.

„ „ *Herbst., Bek. Ins.—Schmett.*, V, pl. 83, f. 3, 4.

„ „ *Fab., Ent. Syst.*, III, 1, p. 159, n. 492.

Acræa Quirina, *Godt., Enc. Meth.*, IX, p. 231, n. 2.

Expands 1 in. 4 lin.—2 in. 1 lin.

♂. *Transparent ashy-grey: hind-wing brick-red with black spots. Fore-wing: base blackish; a brick-red stripe from base, along inner-margin, all the rest of the wing transparent grey. Hind-wing: semi-transparent, brick-red; about fifteen black spots, rounded, and of variable size, in basal half of wing; and a row of seven smaller black spots, situate between nervules, parallel to hind-margin, beyond middle, mark the junction of the red with a broad, transparent-grey, spotless hind-marginal band; base dusky-blackish. UNDERSIDE.—Very like upper-side. Fore-wing: quite like upperside, perhaps a little paler. Hind-wing: red a little paler; a stripe at base, extending a little along costa, yellowish-white; black spots a little more conspicuous.*

♀. *Markings similar; but the brick-red replaced by a dull brownish-ochre. UNDERSIDE.—Hind-wing: ground-colour yellowish-white, instead of red.*

This Butterfly plainly belongs to the *Horta* group of the Genus; but may at once be distinguished from the species last described, by the *transparent-grey, unspotted border* of its hind-wings.

South Africa. Sierra Leone.—Coll. Brit. Mus.

59. *Acræa* Violarum.

Acræa Violarum, *Boisd., App. Voy. de Deleg.*, p. 591, n. 58.

Acræa Natalensis, (? *E. Doubl.*), *MS. in Brit. Mus.*

Expands 2 in. 2 lin.—2 in. 4 lin.

♂. *Soft, creamy, brick-red, with an orange tinge; spotted with black. Fore-wing: base suffused with black; on hind-margin, a narrow black stripe, widest at apex, diminishing to a point at anal angle; a short, black, transverse stripe, on costa before middle, crosses discoidal cell to insertion of third median nervule; a small, narrow, slightly-curved spot occupies the upper portion of the nervules closing discoidal cell; an elongate, transverse stripe of connected black spots, a little beyond cell, from costa to second median nervule; two black spots below cell, touching median nervure, one between second and third median nervules, the other between third median nervule and sub-median nervure; near hind-margin, and parallel to it, a row of seven black, rounded spots of moderate size, extending*

from near costa to just above submedian nervure; a small black spot on inner-margin, slightly beyond middle, and another larger spot a little beyond it, but *above* submedian nervure. *Hind-wing*: base suffused with black, which extends towards anal angle on both sides of median nervure; eight or nine black spots (some of them more or less connected) scattered over wing to beyond middle; a rather broad black band along hind-margin, slightly but regularly dentate on its inner edge, and containing six or seven small, pale-yellowish spots, between nervules. *UNDER-SIDE*.—*Paler than upper-side, with a peculiarly glossy appearance*; black spots not so large. *Fore-wing*: base without black suffusion; at apex, two or three yellowish-white spots in the black marginal stripe. *Hind-wing*: base but narrowly black; spots more distinct than on upper-side, those near base being clearly visible; spots on hind-margin large, conspicuous, paler than above, seven or eight in number. Fringes of wings yellow.

♀. Spotted and otherwise marked as in ♂; but *ground-colour of both wings pale, dull, brownish-ochreous, semi-transparent*.

A description of this species is given by Dr. Boisduval, in his Appendix to M. Delegorgue's Travels; but he does not mention the ♀, of which I have only seen one specimen, from Natal, given me by Mr. C. Morland, of Croydon. The distinctive differences from *A. Violæ*, Fab., that are presented by this Butterfly (which is nevertheless a closely-allied species), are correctly stated by Dr. Boisduval as consisting of the *extra row of spots near hind-margin*, and the *entire nature of the hind-marginal bordering of black*, which does not radiate on the nervules as in *A. Violæ*. The latter is an Indian species.

Natal.—Coll. mihi.

Port Natal.—Coll. Brit. Mus.

60. *Acraea Nohara*.

Acraea Nohara, *Boisd.*, *App. Voy. de Deleg.*, p. 590, n. 54.

♂. *Acraea Actiaca*, *Hewits.*, *Exot. Butt.*, pt. 2, pl. 6, f. 3.

“About the size of *A. Horta*, with the habit of *A. Ralhira*. *Dull fulvous-yellow*; *both wings with a black, white-fringed border*,—very narrow on fore-wings, where it radiates on the nervures to beyond the middle. *Fore-wing*: between the middle and apex, a slender, short, transverse, black band, commencing on costa; towards base, this band is preceded by three black spots, situate on disc. *Hind-wing*: twelve large black spots scattered over wing from base to beyond middle. *UNDER-SIDE*.—*Paler than upper-side*, the hind-wings particularly so. *Hind-wing*: yellowish in tint; the black border intersected by a row of spots of the ground-colour; some fulvous marks between the black spots.”

The above description is translated from that of Dr. Boisduval, in the Appendix to M. Delegorgue's "Voyage dans L'Afrique Australe." I give *A. Actiaca* as a synonym of the ♂ of *A. Nokara*, on Mr. Hewitson's own authority. An *Acræa* in my collection, from Natal, seems to answer to the description given above; but there is a spot within discoidal cell, and another below median nervure, not far from base,—neither of which are mentioned by Boisduval,—and the bases of wings are suffused with black. As, however, the describer of the species states that he had but a single specimen, it is quite possible that slight variations in marking may occur. The insect is evidently nearly allied to both *A. Violæ* and *A. Violarum*.

"Port Natal."—Boisd.

Natal.—Coll. mihi?

61. *Acræa Hypatia*.

Papilio Hypatia, *Dru., Ill. Nat. Hist.*, III, pl. 13, f. 1, 2.

? Papilio Cæcilia, *Fab., Spec. Ins.*, II, p. 34, n. 142,

" " " *Mant. Ins.*, II, p. 16, n. 163.

" " " *Herbst, Nat. Bek. Ins.—Schmett.*, IV,
[p. 205.

Papilio Artemissa, *Stoll., Suppl. Cram., Pap. Exot.*, pl. 25,
[f. 4, 4 d.

Papilio Hypatia, *Fab., Ent. Syst.*, III, 1, p. 163, n. 504.

Var. Papilio Cæcilia, *Fab., Ent. Syst.*, III, 1, p. 177,
[n. 550.

Telchinia Bendis, *Hübner, Verz. Bek. Schmett.*, p. 29.

Acræa Cæcilia, *Godt., Enc. Meth.*, IX, p. 235, n. 16.

Acræa Hypatia, *Boisd., App. Voy. de Deleg.*, p. 590.

Var. *Acræa Natalica*, *Boisd., App. Voy. de Deleg.*, p. 590.
[n. 57.

Expands 1 in. 11 lin.—2 in. 10 lin.

Varies from almost white to pale ochreous, often tinged with soft salmon-red; spotted and bordered with brownish-black; slightly transparent. Fore-wing: base suffused with black to a greater or less extent; apex bordered with black, which narrows into a thin black edging continued to anal angle; a black spot in discoidal cell, about its centre, and another at extremity of cell; a row of four united spots forms a short transverse stripe on costa beyond middle; this row seems as it were continued to a little above and before anal angle, by three separate spots between nervules; parallel to and within these three, are two other spots, in a line below that at extremity of cell; a single spot, the nearest to base in the wing, just below median nervure. *Hind-wing:* base deeply suffused with black; from three to eight rather small black spots scattered over wing to beyond middle,—two on the upper edge of discoidal cell being always present; a broad, black or brownish black, unspotted band along hind-margin; several

spots of the under-side usually showing through the sub-transparent wing. **UNDER-SIDE.**—*Paler*; markings similar; bases of wings not, or very slightly, blackish. *Fore-wing*: two small black spots on costa, close to base; apical and hind-marginal border paler and narrower than on upper-side; within hind-margin, longitudinal yellowish rays between nervules. *Hind-wing*: more or less yellowish in tint; black spots more numerous than on upper-side, larger and more distinct; hind-marginal black band containing seven large yellowish-white spots; near base, and on inner-margin, the ground-colour is sometimes varied with ill-defined reddish marks.

VAR. A. (In British Museum, from Congo).—*Much smaller* than ordinary specimens, 1 inch 11 lines only in expanse of wings. All the *fore-wing* dull ochreous-brown, with many of the spots obsolete; a narrow black apical margin. *Hind-wing*: almost spotless, only showing a whitish space in disc, near anal angle.

VAR. B. (*A. Natalica*, Boisd.) This variety is larger than usual examples of *A. Hypatia*, being 2 inches 9 or 10 lines in expanse. *Deeper in tint than ordinary specimens, being coloured with reddish-ochreous; the black markings mostly strongly defined.* *Fore-wing*: apical portion more produced than usual, paler than rest of wing, pale-ochreous; the short transverse black stripe, from costa beyond middle, broader than usual. *Hind-wing*: marked much as usual, but the spots less numerous towards the base. **UNDERSIDE.**—*Rather more yellowish* than ordinary. *Hind-wing*: within the spotted hind-marginal border is a row of pinkish-red marks, between the nervules, somewhat wedge-like in form. In the ♀ of this variety, the ochreous ground-colour is *duller than in ♂*, and less tinged with red; the basal black being usually wider and duskier than in ♂. *Fore-wing*: a tendency to radiation on the nervules is observable in some of the larger black markings. *Hind-wing*: spots larger than in ♂; hind-marginal band broader, sometimes very broad. **UNDER-SIDE.**—*Duller in tint; spots larger; base of fore-wing suffused with blackish.*

M. Boisduval describes his *A. Natalica* as possessing on the hindwing “a narrow, black spot, having the shape of a square (rule?), on the costa, before the first row of spots;” but at the same time states that, as his description was made from a single specimen, it would not surprise him to find that this mark was a chance variation from the usual pattern. Neither of the three South African specimens of this variety, in the South African Museum, show any trace of the peculiarly-shaped marking in question. Specimens of *Hypatia* in the British Museum were brought from South Africa by Dr. (afterwards Sir) Andrew Smith. M. Boisduval states that

specimens of *A. Hypatia* taken at Natal were *paler* than those of Western Africa, and resembled Stoll's figures, pl. 25, f. 4, 4 d. These figures represent the upper and under sides of a very pale specimen, but with broader black margin than usual, which Stoll received from Sierra Leone.

D'Urban, Natal (R. C. Jones).—Coll. mihi. (var. *Natalica*, Boisd.)

Natal.—Coll. S. A. Mus. (var. *Natalica*, Boisd.)

Interior of South Africa. Congo. Sierra Leone.—Coll. Brit. Mus.

Damaraland.—Coll. C. J. Andersson.

62. *Acræa* Zetes.

Papilio Zetes, *Linn., Syst. Nat.*, II, p. 766, n. 110.

Papilio Menippe, *Dru., Ill. Nat. Hist.*, III, pl. 13, f. 3, 4.

„ „ *Stoll, Suppl. Cram. Pap. Exot.*, pl. 28,
[f. 1.

„ „ *Herbst, Bek. Ins.—Schmett.*, V, pl. 81,
[f. 4, 5.

Telchinia Zetes, *Hübner, Verz. Bek. Schmett.*, p. 27, n. 217

Acræa Zethea, *Godt., Enc. Meth.*, IX, p. 236, n. 21.

Expands 2 in. 3 lin.—2 in. 11 lin.

♂. *Dull brick-red; with black spots and bands. Fore-wing*: base suffused with deep black; in discoidal cell, three black spots,—one round, touching basal black,—another elongate transversely, somewhat quadrate, a little beyond middle of cell,—the third at extremity of cell, variable in thickness, slightly curved outwards; three spots below cell, one touching median nervure, and more or less included in the basal black—another touching second median nervule near its insertion—the third a little beyond the second, below third median nervule; a little beyond extremity of cell, a broad, oblique, black band, directed towards middle of hind-margin, and extending to second median nervule; apical portion of wing, beyond this black band, warm reddish-ochre; apex rather widely bordered with black, which narrows to a thin, hind-marginal edge on first or second median nervule, where, suddenly widening again, its inner edge is united to the extremity of the oblique band from costa, and it extends to anal angle, containing two or three spots, between nervules, of the apical ochre tint. *Hind-wing*: base broadly suffused with deep-black; touching the edge of which, in cell, and about median nervule, is a peculiar and conspicuous clouding of *white* scales; a small black spot at extremity of discoidal cell, and beyond it, a more or less interrupted row of six or seven rounded spots, parallel to hind-margin; a broad, well-defined, black band bordering hind-margin, slightly dentate

on its inner edge. UNDER-SIDE.—Black markings much as on upper-side; but differing much in ground-colours; surface generally glistening, as in *A. Hypatia*. Fore-wing: pale salmon-red; black suffusion at base faint, and only present below median nervure; two black spots on costa, close to base; space between black costal stripe and black-bordered apex, whitish; bordering this white outwardly, and continuing to submedian nervure, a row of six large, elongate, somewhat wedge-shaped, orange-ochreous spots. Hind-wing: pinkish-white; the basal black assumes the form of an irregularly-shaped, but strongly-defined, black patch, containing six quadrate or triangular, small, white spots; costa at base rather broadly edged with salmon-red, containing a more or less conspicuous black spot; outer edge of basal patch is also clouded with salmon-red; spots in central part of wing arranged as above—two additional ones continue the transverse row to inner-margin; these spots are very conspicuous, from the white ground-colour they are on; hind-marginal band broad and black, containing seven or eight moderately-sized white spots; the band being bordered inwardly by a row of seven sub-triangular, brick-red spots.

VAR. A. (from West Africa).—Fore-wing: all dull semi-transparent grey; black spots arranged as usual; a red flush at anal angle; beyond costal black stripe, a whitish patch. Hind-wing: hind-marginal band more suffused inwardly, and occasionally containing a row of spots of the ground-colour.

This is a very handsome and conspicuous species; but I am unacquainted with the female. The apical portion of fore-wing is more produced in *A. Zetes*, than in any other South African *Acræa* I have seen. Drury's figures appear to be those of the variety just described, from West Africa, but are much too highly coloured; more especially the under-side, which does not agree even with his own description.

The Butterfly appears to be not uncommon at Natal.

Natal.—Coll. mihi, et S. A. Mus.

Port Natal.—West Africa. Sierra Leone.—Coll. Brit. Mus.

63. *Acræa Petræa*.

Acræa Petræa, *Boisd.*, *App. Voy. de Deleg.*, p. 589, n. 49.

„ „ „ *E. Doubl.*, *App. List Lep. Brit. Mus.*,
[p. 18.]

Expands 1 in. 11 lin.—2 in. 5 lin.

♂. Brick-red, inclining to orange; spotted with black, and with black borders. Fore-wing: base suffused with black, rather widely so towards inner-margin; costa rather narrowly edged with black; whole of hind-margin with a narrow black border, which radiates strongly upon the nervules; apex is

also more or less clouded with blackish near the border; two good-sized spots in discoidal cell, the outer one touching an oblique black mark on costa immediately above it; a spot, variable in size, at extremity of cell; beyond it, but very close, a rather wide, irregularly-shaped, black stripe from costa, to near middle of hind-margin, where its extremity touches the first of a row of three spots, parallel to hind-margin, between first median nervule and sub-median nervure; above third median nervule, close to its insertion, a rather large, rounded, black spot; below the same nervule, a little beyond the latter spot, a similar, more kidney-shaped spot; a more or less distinct, small black spot beyond middle, on inner-margin, which is *very narrowly* edged with black. *Hind-wing*: base suffused with black; about twelve rather small, round, black spots in basal half of wing, the outer seven or eight of which form an irregularly-waved transverse row; a curved black streak at upper portion of extremity of discoidal cell; hind-margin with a moderately-broad black border, unspotted, which radiates strongly upon nervules. UNDER-SIDE.

—*Paler and duller* than upper-side. *Fore-wing*: dull, creamy salmon-red; a small black mark on costa at base, but no black suffusion; two spots nearest to base wanting; the other spots similar in number and arrangement, but dull-blackish; an additional small black spot just below median nervure, before middle; beyond the blackish stripe, a small space is clouded with *whitish*; no black border on hind-margin, but the nervules are clouded with dark-grey near it, and there are broad, reddish-ochre markings between the nervules, all along hind-marginal border. *Hind-wing*: *reddish-white*; black spots as on upper-side, but three or four more visible close to base, all very conspicuous; interspersed among the spots, several pale-reddish marks; hind-marginal band blackish, radiating in dark-grey on the nervules, and containing seven elongate, yellowish or yellowish-white spots, between nervules, along its outer portion; immediately within band, a row of elongate, wedge-shaped, reddish-ochre marks between nervules.

♀. *Very different from ♂ in colouring*. *Fore-wing*: dull-greyish-brown, with an ochreous tinge; black spots less conspicuous than in ♂, but similar in number and arrangement (except that the spot nearest base is wanting); beyond black costal stripe, a large, very conspicuous, broad, white patch, divided into six portions by crossing nervules, the two sections next costa being very small and narrow, the lower edge of the white touching second median nervule; apex more broadly and darkly clouded with blackish. *Hind-wing*: paler, more ochreous than fore-wing; marked as in ♂, but

the radiations of black on nervules, from hind-marginal band, usually *broader and blacker*, making the rays of ground-colour between them narrower and sharper than in ♂. UNDER-SIDE.—*Fore-wing*: pale-brownish; white patch not so conspicuous as on upper-side; blackish spots as in ♂, but no additional one below median nervure; nervules clouded with blackish near hind-margin; inter-nervular rays dull yellow-ochre. *Hind-wing*: *dull yellowish-white*; black spots as in ♂; scarcely any traces of the interspersed pale-reddish marks; hind-marginal band as in ♂, the spots contained in it rather more yellowish; series of marks immediately within band *dull yellow-ochreous*, ill-defined, usually clouded inwardly with a few blackish scales.

This handsome species appears as yet only to have been taken in the Colony of Natal. M. Boisduval states that M. Delegorgue found it "very common in the environs of Port Natal."

Natal (R. C. Jones).—Coll. mihi.

Natal.—Coll. S. A. Mus.

Port Natal.—Coll. Brit. Mus.

62. *Acræa Lycia*.

Papilio Lycia, *Fab., Syst. Ent.*, p. 464, n. 94.

" " *Herbst., Bek. Ins.—Schmett.*, IV, p. 171.

" " *Fab., Ent. Syst.*, III, 1, p. 176, n. 546.

Acræa Lycia, *Godt., Enc. Meth.*, IX, p. 239, n. 30.

Acræa Sganzini, *Boisd., Faune Ent. de Mad.*, pl. 6, f. 6, 7.

" " *App. Voy. de Deleg.*, p. 590.

Acræa Lycia, *Doubl. Westw. & Hewits, Gen. Diurn. Lep.*,
[pl. 19, f. 2.

Acræa Sganzini, *Doubl., App. List. Lep. Brit. Mus.*, p. 18.

Expands 1 in. 10 lin.—2 in. 8 lin.

Dull-whitish, or whitish-ochreous; with black spots. *Fore-wing*: apical portion, from extremity of discoidal cell, dusky-blackish, narrowing abruptly to a point at anal angle; an oblique broad band of five elongate white spots (the first four of which are united, the fifth smaller and generally separate), crosses the apical black, dividing it about equally, from costa almost to middle of inner-margin; before middle, in discoidal cell, an elongate, transverse, black spot, irregular in shape; occasionally, a smaller ovate spot between the latter and base; at extremity of cell, a large blackish spot, hardly apparent—being merged in apical black; below this spot three or four others, situate between nervules, form a curved, transverse row to inner-margin not far from anal angle; sometimes, also, a small black spot near base, below median nervure. *Hind-wing*: base dusky-blackish, hind-margin with a dusky-blackish,

unspotted, inwardly not clearly defined border,—from which radiate slender blackish streaks, *between* the nervules; a few small black spots near base, in and on the edges of discoidal cell; about middle, or perhaps a little beyond it, a transverse, sinuate, sub-angulated row of seven or eight small, round, black spots, from costa to inner-margin. **UNDER-SIDE.**—*Paler*; black spots similar in number and arrangement to those of upper-side. *Fore-wing*: apical portion, beyond white band, dull orange-ochreous, or pale yellowish-ochreous. *Hind-wing*: base and hind-marginal band of the same colour as apex of fore-wing; sometimes all the ground pale yellowish-ochreous, with a lemon tint; hind-marginal streaks between nervules rather fainter than on upper-side.

VAR. A.—Ground-colour dull brownish-red, or dusky reddish-ochre, paler on hind-wing; black markings similar; white apical band very conspicuous; band on hind-margin of *hind-wing* usually more clearly defined. **UNDER-SIDE.**—Apex of *fore-wing*, and *whole of hind-wing*, *pale ochreous-yellow*; the streaks between nervules brownish-ochre. Chiefly from Natal. A specimen in the British Museum, from Sierra Leone, is all but white in ground-colour.

M. Boisduval notes the brownish-red variety described, as being a form of his *Acræa Sganzzini*. As, however, after a careful comparison of his figures and description with numerous specimens, I have no doubt of *A. Sganzzini* being identical with *Lycia*; I find as little difficulty in reconciling the dark variety to the latter species. M. Boisduval states that *A. Sganzzini* is very common in Madagascar, “found nearly throughout the year, and only ceasing to appear when the rains are very heavy.” (“Faune Entomologique de Madagascar, &c.”) In the Appendix to M. Delegorgue’s “Voyage dans L’Afrique Australe, &c.” he further remarks: “this species is no less common at Natal than in Madagascar; but, instead of being of a pale ochreous-yellow, as in the latter country, it is constantly of a fulvous-brown, with the apical band very white.” The dark variety just mentioned bears considerable resemblance to the ♀ *A. Petræa*, but may be distinguished from the latter by the narrower white apical band, by the more reddish tint of the ground-colour, and by the possession of dark streaks *between* the nervules, from hind-margin of hind-wing.

Natal.—Coll. S. A. Mus.

D’Urban, Natal (R. C. Jones).—Coll. mihi.

Natal. Madagascar. Sierra Leone.—Coll. Brit. Mus.

65. *Acræa Rahira*.

Acræa Rahira, *Boisd., Faune Ent. de Mad., &c.*, pl. 5,
[f. 4, 5.

“ “ “ *App. Voy. de Deleg.*, p. 590.

Expands 1 in. 8 lin.—2 in. 3 lin.

♂. *Warm yellow-ochreous, with a reddish tinge; spotted with black. Fore-wing*: a small, ovate, or kidney-shaped

spot in discoidal cell, a little beyond its middle; a larger, irregular-shaped spot at extremity of cell; costa edged with blackish, widest at apex; beyond extremity of discoidal cell, an oblique, transverse row of four spots, from just below costa to second median nervule, not far from hind-margin; two black spots, one above, and the other below, 3rd median nervule,—lying nearer to base than the row of four spots,—seem almost as if continuous of the latter row; on hind-margin, the nervules are *strongly clouded with blackish*, which, narrowing inwardly, forms sharp, distinct rays, deeply piercing the ground-colour; base narrowly blackish. *Hind-wing*: lower portion of base clouded with blackish; two transverse rows of spots,—one, before middle, of few spots, irregular and interrupted,—the other, commencing about middle of costa, and extending to about middle of inner-margin, is rather sinuous, and angulated on discoidal nervule, from whence to inner-margin it proceeds in a direct line, containing eight spots in all; parallel to the row last mentioned, a more or less distinct grey streak, from just before anal angle, on inner-margin, as far as discoidal nervule; on hind-margin, nervules clouded with blackish, forming a narrow border, dentate inwardly, but not forming nearly such sharp and deep indentations on the ground-colour, as in *fore-wing*. UNDER-SIDE.—*Fore-wing*: *paler* than on upper-side; base with a black spot, but not clouded with blackish; spots as on upper-side, but rather smaller and not so black; apical portion, beyond transverse row of four spots, pale whitish-yellow, with orange-ochreous rays between the nervules, which are narrowly clouded with black. *Hind-wing*: *pale whitish-yellow*; two or three additional, small black spots near base; transverse rows of spots as on *upper-side*; base, inner-margin as far as outer row, and internal edge of straight portion of the latter row of spots, clouded with reddish-ochreous between nervules; space between outer row and parallel streak from inner-margin, wholly spotless, forming a conspicuous pale band,—in consequence of there being elongate, reddish-ochreous marks all along hind-margin beyond streak, between the nervules, which are narrowly black clouded.

♀. Not of so warm a colour, being *duller*, with something of a brownish tint; but similar in marking. *Fore-wing*: an additional, more or less observable, small, thin, black spot, below median nervule, not far from base; other spots as in ♂, but larger and fainter; a paler space of colour beyond transverse row from costa; blackish clouding on nervules not nearly so strong or clearly-defined as in ♂, being much suffused. *Hind-wing*: quite like ♂'s, excepting that the

hind-marginal clouding is of a fainter blackish. **UNDER-SIDE**.—Closely resembles that of ♂, but universally *paler*. *Fore-wing*: pale-yellowish colouring of apical portion extending along costa, and sometimes forming a narrow edging as far as anal angle; the ochreous inter-nervular rays fainter than in ♂. *Hind-wing*: hind-marginal, inter-nervular, reddish-ochreous markings ill-defined, the three next costa obsolete; blackish streak wider than in ♂.

Marshes, and damp, low-lying fields; rarely in gardens.

October (e)—November (m); and January (m)—February (e).

Though local in its haunts, this pretty little *Acræa* is very abundant where it occurs. Its flight is slow and gentle, with a whirring action of the wings, and a tendency to assume a circular direction. It keeps always near the ground, generally delighting in the dense reed-beds fringing river-banks, where it very frequently settles on the flowers of marsh-loving plants. The abundance of this Butterfly in the marshes bordering the little river Bitouw at Plettenberg Bay, in the beginning of February, 1859, was really wonderful to witness. I know of no Rhopalocerous Insect more easily captured than this species. There seems to be, as noted above, two distinct broods of this Butterfly in the year; a marked interval of about two months occurring during my stay at the Knysna, when I did not notice a single individual of this species. The ♀ *A. Rahira* is considerably larger than the ♂. M. Boisduval writes, in the "*Faune Entomologique de Madagascar, &c.*," that M. Goudot stated his having taken this species at Tamatave, on the East coast of Madagascar, but that as he (M. B.) possessed the insect from the "*pays des Hottentots*," he fears that M. Goudot must have obtained it at the Cape of Good Hope, and confounded it with his Madagascar captures. I do not see any necessity for this doubt, so many species of Butterflies being common to both Madagascar and the main land of Africa.

Knysna. Plettenberg Bay.—Coll. mihi.

South Africa. Port Natal.—Coll. Brit. Mus.

Butterworth, Kaffraria (J. H. Bowker).—Coll. S. A. Mus.

"Madagascar?"—Boisd.

66. *Acræa punctatissima*.

Acræa punctatissima, Boisd., *Faune Ent. de Mad.*, pl. 6,
[f. 2.]

Acræa Stictica, Boisd., *App. Voy. de Deleg.*, p. 590.

Expands 1 in. 6 lin.—1 in. 8 lin.

Pale yellow-ochreous, semi-transparent; thickly spotted with black. *Fore-wing*: base slightly blackish; costa narrowly edged with blackish; apex rather broadly clouded with the same; which is continued along hind-margin in a narrow border, forming rounded, spot-like projections between nervules, indenting the ground-colour; three small spots on costa before the middle, and one just beyond the

middle ; four spots in discoidal cell, viz., two small rounded ones near base, only divided from the first two on costa by subcostal nervule,—a large kidney-shaped one, as long as cell is wide, just above insertion of third median nervule,—and a rounded spot, not so large as the last, at extremity of cell ; a good-sized spot below median nervule, before insertion of third median nervule ; a sinuous, irregular, transverse row of seven spots commencing beyond extremity of cell on second sub-costal, and extending to inner-margin about middle,—the last spot being small, but with a prolongation towards base ; parallel and near to hind-margin a row of six round spots between nervules, the upper two generally merged in apical blackish, but quite perceptible. *Hind-wing* : arrangement of spots very similar to that of fore-wing ; two rounded spots above subcostal nervule, before middle ; three in discoidal cell, the outer one at extremity ; between cell and inner-margin about six spots ; a transverse, sinuous row of eight spots beyond middle, continuous of that in fore-wing, from costa to inner-margin ; parallel and near to hind-margin, a row of six rounded spots between nervules, also continuous of that in fore-wing ; a blackish, hind-marginal border, broader than that of fore-wing, and forming rounded projections on ground colour between nervules. UNDER-SIDE.—*Paler*, with a slightly glistening surface ; position and number of spots precisely as above. *Fore-wing* : no basal blackish ; apical blackish limited to a faint and narrow border ; hind-marginal border also wanting, but its projections represented by separate spots between nervules. *Hind-wing* : no basal blackish ; spots on hind-margin as in fore-wing.

This very pretty *Acreea* always reminds me of the Cheetah or Hunting Leopard, from the similarity of its colouring to that of the mammal mentioned. It may be readily known by the large number of spots, which, exclusive of the hind-marginal projections, amount to about forty-eight on the two wings together, or 96 on the whole surface.

M. Boisduval has called the Natal specimens of this Butterfly by the specific name of *Stictica*, but at the same time states his opinion that it is "probably only a local variety of *A. punctatissima*, as it differs solely in the greater size of the spots." After a careful comparison of Natal specimens with the figure and description in the "Faune de Madagascar, &c.," I have come to the same conclusion : though the figure of the small-sized and minute-spotted Madagascar specimen looked at first sight very distinct. M. Goudot found this insect "in damp woods in the neighbourhood of Tamatave." It probably haunts the same description of locality at Natal.

Natal.—Coll. S. A. Mus.

Port Natal.—Coll. Brit. Mus.

"Amazoulu Country. Madagascar."—Boisd.

67. *Acræa Serena*.

Papilio Serena, *Fab., Syst. Ent.*, p. 461, n. 76.

Papilio Eponina, *Cram., Pap. Exot.*, pl. 268, f. C., D.

Papilio Serena, *Herbst., Bek. Ins.—Schmett.*, V, pl. 82,
[f. 6—9.

„ „ *Fab., Ent. Syst.*, III, 1, p. 174, n. 507.

Telchinia Serena, *Hüb., Verz. Bek. Schmett.*, p. 27, n. 219.

Acræa Serena, *Godt., Enc. Meth.*, IX, p. 232, n. 7.

Acræa Manjaca, *Boisd., Faune Ent. de Mad.*, pl. 5, f. 6,
[7, (♂), and pl. 4, f. 6, (♀).

Acræa Serena, *Boisd., App. Voy. de Deleg.*, p. 590.

Expands 1 in. 6 lin.—2 in.

Dull orange-ochreous; with blackish borders and spots.

Fore-wing: base slightly blackish; costa edged with blackish; adjoining the latter, about middle of discoidal cell, a rounded black spot; a black stripe of variable width and irregular form, from costa, at extremity of discoidal cell, sometimes only extending to first median nervule, but oftener to near middle of hind-margin; where it is frequently united to a broad blackish hind-marginal band, which is altogether spotless, with traces of paler spots, or with a row of from six to eight spots of the ground-colour between nervules. *Hind-wing*: base slightly blackish; a small black spot at extremity of discoidal cell; numerous spots of the under-side more or less distinctly visible through the semi-transparent wing as far as middle, or slightly beyond; a broad, blackish band along hind-margin, presenting the same variability of marking as that of fore-wing,—seven being the largest number of inter-nervular spots of the ground-colour contained in it.

UNDER-SIDE.—*Fore-wing*: ground-colour *much paler* than on upper-side; costal blackish replaced by *pale yellowish-ochreous*; apical portion, beyond black stripe, *pale yellowish-ochreous*, which narrows to a point at anal angle; nervules at apex and along hind-margin clouded with black; between them, short ochreous rays; stripe at extremity of cell of a much duller, fainter black than on upper-side. *Hind-wing*: wholly *pale yellowish-ochreous*; three black spots in cell, the outer one at extremity; two above cell, one above, the other below, costal nervure; three below cell, one above, two below, submedian nervure; a little beyond middle, an angulated, somewhat sinuous, transverse row of eight black spots from costa to inner-margin; a blackish border along hind-margin, containing six or seven large, conspicuous, pale-yellow spots between nervules, which are clouded with blackish; from the inner black edging of the hind-marginal

spots project short, black, narrow, line-like marks, often clouded with ochre,—one midway between each two nervules.

Specimens from the West Coast of Africa, almost invariably, have the black stripe at extremity of discoidal cell *united to the hind-marginal border*; the latter, too, is very rarely unspotted, the spots being usually distinct and numerous. A VARIETY of this species, also from Western Africa, occurs, chiefly among the ♀s; it is clouded with *dull brownish-grey*, particularly on the fore-wing; in the latter wing a *whitish band* or space immediately succeeds the black stripe at extremity of cell.

M. Boisduval's figure of the ♀ of his *A. Manjaca*, from Madagascar (in pl. 4 of the "Faune Entomologique de Madagascar, &c."), presents a *further VARIETY* of this Butterfly, if correctly coloured; the *fore-wing* being *transparent greyish-white*, tinged with yellowish on costa, with a pale-blackish, yellow-spotted hind-marginal border; and the disco-cellular stripe reduced to a small blackish crescent; the *hind-wing* being very pale *dull-ochreous*.

In Madagascar, this Butterfly is found "in March and April; it flies in woods, and appears to be rather rare."—Boisd., Faune Ent. de Mad., p. 34.

Natal.—Coll. mihi (C. Morland).

Natal. Congo. Sierra Leone.—Coll. Brit. Mus.

68. *Acræa Cynthia*.

Papilio Cynthiaus, *Drury, Ill. Nat. Hist.*, III, pl. 37, f. 5, 6.

Papilio Eponina, ♂, *Cram., Pap. Exot.*, pl. 268, f. A, B.

Papilio Cynthia, *Herbst., Nat. Bek. Ins.—Schmett.*, IV,
[pl. 80, f. 1, 2.

Acræa Cynthia, *Godt., Enc. Meth.*, IX, p. 234, n. 13.

" " *Boisd., App. Voy. de Deleg.*, p. 590.

Expands 1 in. 4 lin.—2 in. 7 lin.

Blackish-brown; with red-ochreous, or pale yellow-ochreous, bands. Fore-wing: a rather broad, outwardly-inclining, short, transverse band near apex, from costa to first median nervule; a short, broader band, intrenching on discoidal cell, on second and third median nervules, about middle of wing, extending close to inner-margin, on submedian nervure beyond middle; in the *red-coloured specimens*, a red-ochreous stripe along median nervure from base joins the last mentioned band (or rather *patch*); in the *yellow-marked specimens*, the subcostal and median nervures are clouded with dark-red from base. *Hind-wing*: base semi-transparent, of a paler brown than rest of ground-colour, so that several black spots of the under-side are visible with more or less distinctness, as far as the inner edge of a very broad red, or pale-yellow, ochreous band (continuous of the lower band in fore-wing), which occupies middle of wing, from costa to inner-margin; sometimes, a row of indistinct ochreous spots beyond band, near and parallel to hind-margin. UNDER-SIDE.—*Fore-wing*: basal portion always flushed with paler or darker brick-red, which, in specimens marked with yellow-ochreous on upper-

side, extends as far as lower band (but does not intrench on it),—while, in the *red-marked specimens*, the basal red is confounded with the lower band; ground-colour and bands both *much paler* than on upper-side; band near apex pale-yellowish in *all specimens*; hind-margin rather broadly bordered with dusky-grey, most widely so at apex; crossing the grey between nervules, from apex to anal angle, a series of yellow-ochre, elongate rays or triangular marks, edged with blackish, and broadest on hind-marginal edge. *Hind-wing*: base greyish; two short, transverse rows of irregularly-shaped black spots enclose a dull-red band, immediately before median band, which is always pale-yellowish; hind-marginal grey much broader than in fore-wing, reaching to outer edge of median band; and the rays crossing it,—which are pale-yellowish on hind-marginal edge, and orange-ochreous inwardly,—are prolonged as far as the grey is broad, giving the border of the wing a very beautiful and peculiar, deeply-vandyked appearance.

A VARIETY of this elegant Butterfly, from West Africa, is in the British Museum. This specimen is so strongly suffused with *dull grey-brown*, that the distinctive markings on upper-side are almost obliterated.

All the South African specimens that I have seen, amounting to nine in number, are of the *yellow-marked variety*. In Western Africa, both the red and yellow marked specimens are found; so that it is possible the former may also occur at Natal.

Natal.—Coll. mihi (C. Morland), et Coll. S. A. Mus.

Port Natal. Congo. Sierra Leone.—Coll. Brit. Mus.

“Amazoulou Country.”—Boisd., App. Voy. de Deleg.

69. *Acræa Aganice*.

Acræa Aganice, *Hewits., Exot. Butt.*, pt. II, pl. 6, f. 3.

Expands 3 in. 8 lin.

Dull-black, tinged with brown; with white bands. Fore-wing: on costa, a little beyond middle, commences a transverse, rather irregularly-shaped, white band, divided into eight portions of variable size and shape by the nervules crossing it, and almost reaching anal angle; from hind-margin extend short striæ, between nervules, slightly darker than ground-colour. *Hind-wing*: base slightly tinged with ochreous, and spotted with black; central portion of wing occupied by a very broad, white band, from costa to inner-margin; from hind-margin extend long striæ, slightly darker than ground-colour, between the nervules, piercing the broad white band. *UNDERSIDE*.—*Much paler*; white markings similar to upper-side. *Fore-wing*: apex and hind-margin

coloured with ochreous-brown, on which the dark striæ between nervules show distinctly. *Hind-wing*: base more reddish in tint than on upper-side, the spots larger, blacker; hind-marginal portion, beyond band, coloured with ochreous-brown; the dark striæ conspicuous, and extending, *very faintly*, quite across the broad white band.

Mr. Hewitson's *Aganice* very strikingly resembles *A. Euryta*, Linn., Sp., which is a native of Western Africa; and I think it likely that the former will prove to be a variety of the latter. The type specimen of *Aganice* is in the British Museum. It appears to be a rare insect at Natal, as with the exception of one since forwarded to me from D'Urban, Natal, by Mr. R. C. Jones, the above is the only specimen I have seen of this species.

Port Natal.—Coll. Brit. Mus.

Natal (R. C. Jones).—Coll. mihi.

70. *Acræa Protea*.

Acræa Protea, mihi.—N. Sp.

Expands 2 in.—2 in. 10 lin.

Allied to *A. Aganice*,—very variable in colouring.

Black, tinged with brownish; with white bands. Fore-wing: beyond middle, from costa, nearer apex than in *Aganice*, an oblique white band, narrower than, and not so irregular as, in *Aganice*, not reaching below second median nervule, only divided into five (or at most six) portions by the nervules crossing it, and tending towards middle of hind-margin; on inner-margin, occupying its central portion, is a whitish patch, inclining to a semi-circular form, not rising above third median nervule. *Hind-wing*: base tinged with ochreous and black-spotted as in *Aganice*,—but the ochreous-tinged space not extending nearly so far, and the black spots fewer and smaller; central portion, from costa to inner-margin, occupied by a broad white band, which extends nearer to base than in *Aganice*, and has its outer edge more irregular—it being strongly indented by conspicuous, short black striæ, between nervules, from hind-margin. (Both the inner-marginal marking on fore-wing, and the band on hind-wing, are sometimes pale-yellowish instead of white.) UNDER-SIDE.—Very similar to that of *Aganice*; but the same differences as on upper-side observable in the white bands: the ochreous colouring on apex and hind-margin of both wings *brighter* than in *Aganice*, causing the longitudinal dark striæ between nervules, from hind-margin, to show more conspicuously. *Hind-wing*: the reddish tinge at base much fainter and narrower than in *Aganice*.

VAR. A.—The bands similarly arranged; but *all pale ochreous-yellow*, instead of white. UNDER-SIDE.—Paler; band near apex of fore-wing sometimes *almost white*.

VAR. B.—The bands similarly arranged; but that near apex of fore-wing *white*, or sometimes *pale-yellowish*, while the inner-marginal marking (which usually extends to base of second median nervule), and the broad band in hind-wing, are *dull reddish-ochreous* or brick-red. UNDER-SIDE.—Similar, but much duller and fainter; the ochreous hind-marginal and apical colouring much *darker and redder* than in other varieties,—so that the hind-wing presents an almost identical ground-colour throughout.

The typical form of this interesting and variable species is, on a cursory view, so much like *A. Aganice*, that I at first was led to think that it might be only a variety of the latter. But a more careful comparison of a long series of specimens with an indubitable example of the actual *Aganice* from Natal has convinced me of the specific distinctness of *A. Protea*, mihi. I entertain no doubt, however, of the two varieties I have just described being specifically identical with *A. Protea*, different as they appear at first sight. The fact of the apical band of fore-wing being often found pure-white in both these darker-hued varieties especially strengthens me in this opinion. As the insect seems to be spread over a considerable extent of country, it is probable that other interesting varieties may occur.

Natal (C. Morland and R. C. Jones). King William's Town (W. S. M. D'Urban).—Coll. mihi.

Natal. Butterworth, Kaffraria (J. H. Bowker).—Coll. S. A. Mus.

Port Natal.—Coll. Brit. Mus.

71. *Acræa Amazoula*.

Acræa (*Alæna*) *Amazoula*, *Boisd., App. Voy. de Deleg.*, [p. 591, n. 60.]

Expands 1 in. 3 lin.

Yellow-ochreous; with *blackish borders and nervures*. *Fore-wing*: pale yellow-ochreous; costa with a blackish border of moderate width, which becomes broad at apex, and thence narrows to anal angle; all the nervures and nervules, from base to hind-margin, clouded with blackish; a blackish spot at extremity of discoidal cell. *Hind-wing*: no costal blackish; a narrow, hind-marginal blackish border; a slight thickening of the blackish clouding on disco-cellular nervule at extremity of cell; nervures and nervules universally clouded with blackish. UNDER-SIDE.—*Paler* than upper-side, with a *hoary-whitish tint*; the nervures more narrowly and faintly clouded. *Fore-wing*: most yellow in cell and on disc; costa only slightly blackish near base; apical and hind-marginal border only indicated by a greyish tint. *Hind-wing*: *whiter* than fore-wing; a narrow greyish edging along hind-margin.

This curious little Butterfly has rather short antennæ, with abrupt, rather large clubs. The discoidal cell of hind-wing is considerably more elongate than in other South African *Acrææ*, and gradually widens to extremity, where it is rather abruptly truncate. Its small size and want of spots, with the clouded nervures, readily distinguish it from any known South African species. M. Boisduval proposes that it should form the type of a new Genus, called *Alona*. It seems rare in collections, its small size and inconspicuous appearance probably rendering it liable to be overlooked by collectors. Nothing is recorded of its haunts or habits. A single specimen in my collection was among the captures of Herr Guenzius, at Natal.*

Natal.—Coll. mihi.

“Amazoulu Country.”—*Boisd.*

FAMILY 5.—NYMPHALIDÆ.

NYMPHALIDÆ, *Swains.*

NYMPHALIDÆS, *Boisd.*

NYMPHALII, } *Blanch.*

NYMPHALITES, }

NYMPHALIDI, *Steph.*

ARGYNNITES, *Blanch.*

ARGYNNIDÆ, *Dup.*

ARGYNNIDI, *Steph.*

ARGYNNITÆ, *Chenu.*

VANESSIDÆ, *Dup.*

VANESSIDI, *Steph.*

IMAGO.—*Head* of moderate size, or rather broad; *eyes* rounded, prominent, usually smooth; *palpi* always well-developed, more or less elongate, projecting considerably beyond head, their tips generally approaching each other, more or less hairy beneath; *antennæ* rather long, stout (particularly in the most typical Genera), with a divers shaped club, which is sometimes broad, abrupt, and flattened; and sometimes gradully formed, and more or less cylindrical.

* Mr. D'Urban took a few specimens of this singular *Acræa* in British Kaffraria, and has furnished me with the following note of capture: “Near Fort Murray, March 20th, 1861.—Flying amongst long grass, like a ‘skipper.’” These examples are more deeply-tinted than those described by Dr. Boisduval, and are *much suffused with blackish* on both wings from base to beyond middle; the white on underside is conspicuous, as well as the clouded nervures, and the yellow on fore-wing deeper. They are smaller than described above, being about 1 in. in expanse; and possess the yellow neck and abdominal colouring mentioned by Dr. Boisduval as indicative of the ♀ of this species.

Thorax large, more or less ovate, robust, more or less pilose. *Wings* large, of thick texture, supported by strong nervures. *Fore-wings* variable in outline; costa more or less arched, sometimes very strongly so; hind-margin sometimes concave, being produced in apical portion,—sometimes with a more or less elongate projection a little below apex—or nearly straight, with a slight concavity in centre—always more or less dentate; inner-margin usually more or less emarginate in centre; first discoidal nervule joined to sub-costal nervure; discoidal cell either open, or closed by a very thin nervule (only perceptible on close inspection). *Hind-wings* likewise variable in outline; costa always markedly convex next base, beyond which its arched character is very marked in some Genera, in others very slight; hind-margin more or less dentate or scalloped, sometimes with a tail or sharp projection on first median nervule (in one Genus with a second tail on third median nervule);—occasionally with the anal angle produced into a sharp projection; inner margins strongly convex from base to beyond middle, and completely enclosing the under-side of the abdomen in a more or less deep groove, by their edges meeting below it; discoidal cell generally open, sometimes closed by a thin nervule. *Legs* rather long and stout; except the first pair, which are short, appressed to the thorax, often densely hairy, and entirely useless for walking. *Abdomen* rather small and short, especially in the males; sometimes *not half* the length of the inner-margins.

LARVA.—Elongate, cylindrical; often with strong spines (more or less branched); the segments generally well-marked; sometimes smooth, thickened in the middle, with a pair of horns on the head.

PUPA.—Moderately stout, more or less angulated; abdominal portion generally much curved; suspended by the tail only.

The Butterflies of this extensive Family are remarkable for swiftness of flight, and, as a rule, for brilliant colouring and intricate marking. They are tolerably well represented in South Africa; thirty-four species, comprised in thirteen Genera, having already been recorded from this region. The Family, as characterised above, contains the Sub-families *Argynnidi*, *Vanessidi*, and *Nymphalidi*, of some authors; but not the *Satyridi*, which, in the arrangement I have followed, are considered as a distinct Family named *Satyridæ*. Most of the *Nymphalidæ* found in South Africa are Butterflies of moderate size, but several species take rank among the largest found in the country. Among the latter is the lovely mother-of-pearl-like *Junonia Anacardii* of Linné; as well as the

richly coloured *Meneris Tulbaghia*, Linn., warm-brown and ochre, with blue ocellated spots. The strong-winged species of *Nymphalis*, also, with their beautifully variegated under-surface, are insects of considerable size, *N. Xiphares* expanding nearly four inches and a quarter. It is in forests, that the species of the most typical Genera must be looked for; but many others frequent gardens and open ground. The species most likely to be the first taken by the collector is the abundant *Pyrameis Cardui*, Linn. Sp., which is not only spread over nearly the whole globe, but appears to be everywhere common. Though very wary of approach, and, as before stated, possessed of great powers of flight, the habit that most of the *Nymphalidæ* possess, of haunting some spot of limited extent—sometimes even a particular twig of some tree or plant—returning to it again and again, often makes them fall a prey to the entomologist, who might otherwise despair of obtaining them.

Genus A T E L L A.

Atella, *E. Doubl.*

Argynnis, *Godt., Boisd.*

Phalanta, *Horsf.*

IMAGO.—*Head* rather strikingly broad, being wider than thorax: *eyes* prominent, naked; *palpi* not meeting at tips, which are sharply pointed, but slightly divergent, rather long, finely hairy, projecting considerably beyond and above forehead; *antennæ* long and stout, terminating in a short, rounded, laterally-compressed, yet gradually-formed club. *Thorax* moderately robust, short, ovate, moderately hairy. *Fore-wings* with the apical portion produced, so as to make the hind-margin rather concave in the centre; costa strongly arched from base; apex not acute, but rounded; inner-margin very slightly emarginate about its centre; discoidal cell short, closed by slender nervules. *Hind-wings* sub-ovate, rather truncate: costa slightly arched; hind-margin moderately dentate; anal angle rather marked; inner-margins barely meeting beneath abdomen, forming a shallow incomplete groove; discoidal cell very short, closed by slender nervules. *Abdomen* short, much compressed laterally.

LARVA.—“*Spiny*; the spines all of equal length.”—Chenu.

PUPA.—“Ovate, elongate, constricted, *spinous*.”—Chenu.

This Genus, which is closely allied to *Argynnis*, Fab., is very limited in species, of which one only is found in South Africa.

72. Atella Phalanta.

Papilio Phalanta, *Drury, Illus. Nat. Hist.*, I, pl. 21, f. 1, 2.

Papilio Phalantha, *Fab., Syst. Ent.*, p. 518, n. 318.

Papilio Columbina, *Cram., Pap. Exot.*, pl. 238, f. A, B;
[and pl. 337, f. D, E.

Papilio Phalanta, *Fab., Ent. Syst.*, III, 1, p. 149, n. 455.

Papilio Phalanthus, *Herbst., Bek. Ins.—Schmett.*, IX,
[pl. 256, f. 5, 6; and pl. 257, f. 1, 2.

Argyronome Columbina, *Hübner, Verz. Bek. Schmett.*, p. 32.

Argynnis Phalanta, *Godt., Enc. Meth.*, IX, p. 259, n. 10.

„ „ *Boisd., Faune Ent. de Mad.*, p. 41.

„ „ *Boisd., App. Voy. de Deleg.*, p. 592.

Phalanta Columbina, *Horsf., Desc. Cat. Lep. Mus., E. I. C.*,
[pl. 7, f. 5.

Atella Phalanta, *Horsf. & Moore, Cat. Lep. Mus. E. I. C.*,
[p. 151.

Var. ♂. Atella Eurytis, *Doubl. Westw. Hewits., Gen.*

Atella Eurytis, *Chenu, Enc. d'Hist. Nat.*, f. 191.

[*Diurn. Lep.*, pl. 22, f. 3.

Expands 2 in. 3 lin.—2 in. 6 lin.

♂. Warm yellow-ochreous; spotted with black; hind-margins festooned with black. Fore-wing: two thin, transverse, black streaks in discoidal cell, that nearer base short, the other indented and almost crossing cell; at extremity of cell, two transverse, similar streaks,—one outwardly, the other inwardly, bordering the closing nervules; beyond cell, from costa to first median nervule, an irregular black stripe composed of four spots, of which the fourth and lowest spot is always beyond, and generally quite separate from, the others; immediately below median nervule, and all but touching it, are three spots, one above, and one below second median nervule, the other below third median nervule; beyond middle, on costa, a dusky-blackish, waved streak to second discoidal nervule; sometimes continued to first or second median nervules, by one or two small blackish spots; hind-margin festooned with arched, united black streaks, the tips of which are connected with a series of sub-triangular spots on hind-marginal edge, at extremities of nervules; a distinct, straight, black line from costa to anal angle, between festoons and spots, cutting their points of junction at right angles; within the festooned line a row of five small, rounded spots, between nervules, parallel to hind-margin,—the lowest spot being larger than, and slightly beyond, the others, and touching the last festoon, near anal angle. Hind-wing: festooned hind-margin similar to that of fore-wing, but the

tips of the festoons do not always touch the hind-marginal spots (which are more rhomboidal in form than those of fore-wing), and the line between the festoons and spots is not straight as in fore-wing, but composed of united, thin, lunular streaks; within festooned line, and parallel to hind-margin, but beyond extremity of discoidal cell, a row of four or five rounded, black spots, variable in size, between nervules, the first spot immediately below first subcostal nervule, the fifth below third median nervule; on costa, beyond middle, is an irregular, black streak, sometimes indistinctly continued across wing to inner-margin by disconnected, short, blackish lines. **UNDERSIDE.**—Somewhat *glossy*, as in many of the *Acrææ*; pale yellow-ochreous, varied with dull-violet; the black markings mostly thin, and dimmer than above, or replaced by brownish-ochreous. *Fore-wing*: discoidal cell, and central portion of hind-margin, glossed with violet; transverse streaks in cell much thinner than above, but very distinct; costal streak next cell ill-defined, or indicated by two or three black dots; spots immediately below median nervule black, and rather conspicuous; costal streak beyond middle brownish-ochreous,—the row of spots continuous of it extending to beneath third median nervule, and all brownish-ochreous, but the lowest, which is black; hind-marginal festoons and straight streak only indicated by violaceous-grey and brownish-ochreous markings,—no traces of spots at extremities of nervules; row of spots within festooned line usually very ill-defined, blackish,—except the two lower ones, that next anal angle being large, black, quadrate, and very conspicuous. *Hind-wing*: an irregular, interrupted, brownish-ochreous streak, from costa before middle to inner-margin beyond middle; a short, transverse streak of the same colour in discoidal cell; a more continuous, less irregular streak than the interrupted one, crosses wing a little beyond the latter; the space between it and the hind-marginal festooned line dull-violet, varied with the pale ground-colour, and containing three or four ill-defined black spots, in brownish-ochreous rings; hind-marginal lines brownish-ochreous; no spots at extremity of nervules.

♀. *Larger than ♂, often with a greenish tinge* (similar to that of many ♀s of the Genus *Argynnis*); and with the *black markings larger*. *Fore-wing*: the row of spots, commencing with an irregular, blackish mark, on costa beyond middle, always continued to below third median nervule, slightly beyond middle, and consisting of four spots. **UNDERSIDE.**—*Fore-wing*: the same row of spots more conspicuous than in ♂, being usually blackish. *Hind-wing*: the spots on disc, in violet portion, generally larger and blacker.

LARVA.—*Green*; a white stripe along each side, above the legs; four branched spines, of moderate length, on each segment but the last, which has but two spines; head brownish-red.

PUPA.—*Green*, darker on the back, inclining to yellowish beneath; margin of wing-covers defined with blackish; along the back from neck to tail are several little, pointed, tubercular processes, short and apparently shining blackish.

The above descriptions of Larva and Pupa are made from figures in Horsfield and Moore's "Catalogue of Lepidoptera" (1857), pl. 5., f. 7, 7. a. The specimens figured are stated to have been found in Java, in the month of November, feeding on a species of *Leora*.—Vide p. 152, Cat. Lep. Mus. E. I. C.

This warmly tinted "Fritillary" Butterfly is subject to considerable variation of hue; especially as regards the distribution and particular shade of the violet colouring of the *under-surface*. The number and size of the black spots is also variable, as noted in my description. The only noticeable distinction in the specimens named *Atella Eurytis* by Mr. Doubleday, is the absence of the three black spots immediately below the median nervure of forewing. The specimens presenting this variation were brought from Congo. Some examples from Sierra Leone, in the British Museum, are deeper in tint, than usual, and possess broader hind-marginal markings than the generality of specimens.

Natal (C. Morland).—Coll. mihi.

Mauritius.—Coll. S. A. Mus.

Port Natal. Congo. Sierra Leone. India. China.
Java.—Coll. Brit. Mus.

Java. North India.—Coll. E. I. C. Mus.

"Madagascar. Bourbon. Mauritius."—Boisd.

Genus PYRAMEIS.

Pyrameis, Hübn.

Cynthia, Fab.

Vanessa, Latr.

IMAGO.—*Head* moderately wide, clothed with short hair; *eyes* finely clothed with hair; *palpi* long, ascending a little above, and projecting considerably beyond, forehead,—more or less convergent at tips, scaly, and finely hairy; *antennæ* rather long, with an abruptly formed, flattened, rounded club. *Thorax* rather long, robust, hairy. *Fore-wings* more or less markedly produced in apical portion, causing a corresponding concavity in central portion of hind-margin; costa slightly or moderately arched; apex usually rather angulated; hind-margin more or less sinuate; anal angle rounded. *Hind-wings* broad: costa very slightly arched, except at base; hind-margin sinuate, sometimes with short, angular projections or tails; inner-margins deeply grooved, and wholly concealing

under-side of abdomen. *Legs* rather long and stout; the first pair rather conspicuous, very hairy. *Abdomen* short, about half the length of inner-margins of hind-wings.

LARVA.—Elongate, cylindrical, with distinctly marked segments; clothed with strong branched spines.

PUPA.—Moderately stout, angulated; head rather bluntly bifid; ornamented with gilded spots and washes.

This Genus contains two South African species, very readily distinguishable;—*P. Cardui*, Linn. Sp., being salmon-red varied with black; and *P. Hippomene*, Boisd. Sp., having a ground-colour of black, with a yellow-ochre bar on both wings.

The following remarks of Mr. Doubleday, in the “Genera of Diurnal Lepidoptera,” are interesting and worthy of quotation. “I have dwelt particularly on the geographical distribution of this Genus, so poor in species,* yet so universally distributed, presenting two distinct sections, species of which are known to co-exist in almost every part of the world, *except the Southern parts of Africa* and America; never, except in Australia, presenting more than two species in the same district, and these generally of different sections. Thus, *Pyrameis Cardui* has for its compatriot in Europe *P. Atalanta*; further South, in the Old World, *P. Callirhoë*; in Java, *P. Dejeanii*; in Australia, *P. Itea*, and an undescribed species, of which I have only seen the fragment in the Collection of the British Museum; in New Zealand, *P. Itea* and *P. Gonerilla*; in the Sandwich Islands *P. Tammeana*. At the Cape of Good Hope and Sierra Leone, it (*P. Cardui*) appears to be the only species of the Genus.”—Gen. Diurn. Lep., p. 204.

Mr. Doubleday either had not access to, or overlooked, M. Boisduval’s “Faune de Madagascar, &c.,” or *Pyrameis Hippomene*, figured therein, must have at once impressed him as furnishing a further illustration of what he remarks on, with reference to the islands of Mauritius and Bourbon; *P. Hippomene* belonging to the *Atalanta* section of the Genus, and *P. Cardui* being a common inhabitant of the islands mentioned. But the discovery of *P. Hippomene* as inhabiting the South of Africa adds another evidence to the truth of what Mr. Doubleday advanced, by removing one of the exceptions he mentions, which I have italicised in the quotation. The species of *Pyrameis* are closely allied to the Genus *Vanessa*, Fab. They are powerful fliers, but settle very frequently; so that, by the

* Ten species are enumerated in the “Genera.”

exercise of a little care and patience the collector can usually succeed in capturing them,—a result which is considerably aided by the boldness of these Butterflies.

73. *Pyrameis Cardui*.

- Papilio Cardui*, *Linn., Syst. Nat.*, II, p. 774, n. 157.
 „ „ *Fab., Syst. Ent.*, p. 499, n. 239.
Papilio Carduelis, *Cram., Pap. Exot.*, pl. 26, f. E, F.
Papilio Cardui, *Fab., Ent. Syst.*, III, 1, p. 104, n. 320.
Vanessa Cardui, *Hübner, Verz. Bek. Schmett.*, p. 33.
 „ „ *Godt., Enc. Meth.*, IX, p. 323, n. 62.
Cynthia Cardui, *Steph., Ill. Brit. Ent.—Haust.*, I, p. 47.
Vanessa Cardui, *Boisd., Faune Ent. de Mad.*, p. 43.
Cynthia Cardui, *Duncan, Brit. Butt.*, pl. 19, f. 2, 2.
 „ „ *Westw. and Humph., Brit. Butt.*, pl. 15,
 [f. 7, 8.
Vanessa Cardui, *Boisd., App. Voy. de Deleg.*, p. 592.
 „ „ *E. Doubl., List. Lep. Brit. Mus.*, I, p. 79.
Pyrameis Cardui, *Chenu, Enc. d'Hist. Nat.—Pap.*, f. 213.
Cynthia Cardui, *Staint., Man. Brit. Butt. and Moths*, p. 37.
Pyrameis Cardui, *Horsf. & Moore, Cat. Lep. Mus. E. I. C.*,
 [p. 138,

Expands 2 in. 2 lin.—2 in. 7 lin.

Paler or darker salmon-red, inclining to orange-ochreous, varied with black; apical portion of fore-wing black, spotted with white. Fore-wing: basal portion blackish, thickly dusted with golden scales; in discoidal cell a short, rather broad, black, transverse mark, the lower edge of which almost touches the upper point of an irregular, angulated, black marking, commencing on inner-margin beyond middle, and thence, arching outwardly, extending along third median nervule into discoidal cell; apical black extending fully half-way along costa,—its inner edge forming two deep, irregularly-angulate inundations on the salmon-red ground-colour, and containing an elongate, abruptly-truncate, white stripe from costa, divided into three by nervules, beyond which is a curved row of four white spots from costa to first median nervule, parallel to hind-margin; two rows of lunules along hind-margin, the outer row ochreous, the inner whitish, becoming half obliterated near anal angle; fringe chequered black and white. *Hind-wing*: costal, basal, and inner-marginal portions broadly blackish, the two latter dusted with golden scales, and inner-marginal region with long, silky, golden hairs; a little beyond middle, a transverse blackish stripe, thin near costa, but suddenly thickening on first median nervule, unites costal and inner-marginal blackish;

beyond this stripe are three rows of spots parallel to hind-margin—the first consisting of four or five rounded black spots between nervules—the second of sub-lunular spots, sometimes contiguous, between nervules (of which the fifth spot, at anal angle, is the largest, and has its outer half pale-blue)—the third of more or less rhomboidal spots *on* nervules, generally united by their lateral angles; fringe as in fore-wing. **UNDER-SIDE.**—*Much paler* than upper-side; *the hind-wing exquisitely marbled*. *Fore-wing*: base and costa whitish, the former with a single blackish dot, the latter with numerous short, minute, blackish, transverse striæ as far as black spot in discoidal cell; salmon-red much paler than on upper-side, particularly near hind-margin, but next base *suffused with a soft, pale-carmine tint*; a whitish space in cell, beyond black spot, and another whitish tint beyond cell, which is closed by a black stria; white spots as on upper-side, but apical black *replaced by yellow-ochreous*, which extends along hind-margin; two blackish spots on hind-margin close to anal angle; and a more or less distinct row of blackish, outwardly white-edged, lunules parallel to hind-margin. *Hind-wing*: varied with white and various shades of yellow-ochreous, *nervures white*; a conspicuous white space immediately beyond extremity of discoidal cell; and three irregular, whitish markings on costa; two before, and one about, middle; a transverse, ochre-brown, white-edged mark in discoidal cell; and near it a larger, similar mark, divided into three by nervules—its lower portion on disco-cellular nervule; near, and parallel to hind-margin, a row of five round, ocellated spots, situate between nervules, from first subcostal to third median, and variously coloured, viz.: the first, nearest costa, a simple, ovate whitish spot, containing an ochreous dot—the second blackish-centred, with sometimes a small blue pupil, ringed with yellow and black—the third and fourth black, with a large metallic-greenish lunule, and ringed with pale yellow—the fifth larger than the rest, with a black, blue-lunuled centre, in red, yellow, and black rings; beyond these spots a row of narrow, violet blue lunules, the largest next anal angle and edged with black internally; succeeded by a parallel white stripe; the hind-marginal border yellow-ochreous.

LARVA.—*Blackish*, with numerous branched *yellow spines*; two faint-yellowish, longitudinal streaks along the back, and a brighter yellow, broader, interrupted stripe on each side above the legs; head black; segment next head not spined, four spines on both third and fourth segments, seven on each segment from fifth to twelfth, four on the last or anal seg-

ment; legs reddish-ochreous; under-side greyish. $1\frac{3}{4}$ or 2 inches long. Feeds on Thistles, *Mulvaceæ*, and other low plants.

PUPA.—*Greyish-ochreous, more or less gilded* on the back and wing-covers; with three rows of brightly-gilded, pointed tubercles down the back. Suspended to plants, walls, &c.

Open ground generally, fields, gardens, hill-sides, and waste places.

Throughout the year, but most common from September to March.

Pyrameis Cardui is one of the most interesting Butterflies known, from the fact of its being literally cosmopolitan. Except the Arctic and Antarctic regions, all parts of the world have furnished specimens of this beautiful insect. Not only is this species so universally distributed over the earth's surface, but it appears to be common everywhere. The oceanic islands, as well as the continents, are inhabited by this Butterfly; and once, when at sea, a specimen flew on board, when the vessel I was in was about ninety miles to the West of Teneriffe. In England, and on the continent of Europe, *P. Cardui* sometimes appears in great abundance, and then, perhaps for several seasons, will be uncertain in appearance, and restricted to particular localities. I have not heard of this irregularity of appearance being noticed in other parts of the world.

The Butterfly is exceedingly fearless, returning again and again to the same spot from which the collector has scared it; but it is at the same time very wary of anyone's approach.

Cape Town. Knysna. Plettenberg Bay. St. Helena.—Coll. mihi.

“Port Elizabeth to Queen's Town.”—D'Urban.

Cape of Good Hope. Canada.—Coll. S. A. Mus.

“Natal, universally.”—Boisd.

“Teneriffe. Sierra Leone. Egypt. Europe generally. Asia and Asiatic Islands. Sandwich Islands. Australia. New Zealand. America from Hudson's Bay to Venezuela.”—Gen. Diurn. Lep., p. 203.

“Barbary. Senegal. Madagascar. Bourbon. Mauritius. Bengal. Java. China. Brazil. Cayenne. Tahiti.”—Boisd.

74. *Pyrameis Hippomene*.

Vanessa Hippomene.—*Boisd., Faune Ent. de Mad.*, &c., [pl. 8, f. 3, 4.

Glossy-black; a band of ochre-yellow in both wings; apical portion of fore-wing spotted with white.

♂. *Fore-wing*: ochre-yellow band crosses wing from costa a little before middle to inner-margin a little before anal angle, thickening a little as it descends, and slightly arched outwardly; between band and apex, three small spots form a thin transverse streak on costa—the spot on costal edge being ochre-yellow, the other two white; beyond this, a row of from five to seven small white spots, running parallel to apical half of hind-margin; apical projection rather strongly

marked; hind-margin moderately sinuate, the fringe in the hollows of the indentations *white*. *Hind-wing*: an ochre-yellow band, narrower than, but almost continuous of, that in fore-wing, borders hind-margin as far as first median nervule, at the extremity of which is a prolongation of the hind-margin into a slender tail about 3 lines in length, blackish, *with an ochreous tip*; the third median nervule also supports a much shorter, pointed, black tail, about 1 line long; between longer tail and anal angle, some contiguous, bluish, lunular marks. **UNDERSIDE**.—*Fore-wing*: ground-colour dull brownish-black; transverse ochre-yellow band *much paler* than on upper-side; apical portion varied with ferruginous and brownish-ochreous; in discoidal cell, near base, a black, ferruginous-centred spot, in a bluish-white ring; beyond it, its outer edge touching transverse band, a similarly coloured transverse marking, the white edges of which are irregularly prolonged to submedian nervure; a little beyond band, and bordering disco-cellular nervule, a pale-ferruginous marking; apical markings of white similar to those of upper-side—but within the white transverse streak from costa is a parallel bluish streak; hind-margin ferruginous-ochreous, with an inner bluish streak formed of contiguous lunules. *Hind-wing*: ground-colour dull-blackish, *varied beautifully with ferruginous-brown markings, and bluish and black waved streaks*; two ferruginous-brown spots in cell, one close to base, rounded—the other about middle of cell, elongate; the latter spot forming a continuation of a streak of the same colour above it, from subcostal nervure; a band of ferruginous-brown, divided into three by nervules (as in *P. Cardui*), bounds extremity of discoidal cell; all these brown markings are thinly and indistinctly edged with bluish-white; near inner-margin and base are numerous sprinklings of bluish scales, in some places forming short ziczac lines; parallel to hind-margin is a ferruginous-brown, waved streak, inwardly bordered by a black one; hind-marginal ochreous band indicated by a reddish-ochreous tint; within which is a festooned black line of united lunules, inwardly edged with bluish—the lunule between second and third median nervules *pupillate*, and approaching the form of an ocellate spot; within hind-marginal edge, a blackish, interrupted streak.

♀. *Black not of so deep a tint as in ♂*; ochre-yellow bands *paler, broader*. *Fore-wing*: white spots near apex larger; the lower spot, of the three forming transverse costal streak, more separate from the other two than in ♂. *Hind-wing*: ochreous hind-marginal band *much broader* than

in ♂, extending a little beyond first median nervule; tail at extremity of this nervule *much shorter* than in ♂, and the tail on third median only indicated by a short projection of outline; two rows of ochreous lunules, thickly sprinkled with metallic-bluish scales, border hind-margin between first median nervule and anal angle—the lunules next anal angle being wholly bluish; within lunules, two deep-black, blue-centred spots, in very indistinct ochreous-dotted rings—one between first and second, the other between second and third, median nervules, *the latter containing a purplish-crimson lunule*, bordering the blue centre inwardly. UNDER-SIDE.—Differs in several respects from that of ♂. *Fore-wing*: costa between base and commencement of band *transversely striped with white*; spot near base in discoidal cell not so round or large, wanting ferruginous centre, its white edges not encircling it—the outer white edge commonly united at its upper end to inner white edge of *outer disco-cellular spot*; transverse band very pale, *whitish on costa*; a thin bluish streak from costa a little before, and parallel to, the bluish streak described in ♂, the two lines enclosing a blue-dusted space; apical colouring paler and duller, not so widely-spread, the white markings clear and conspicuous; hind-margin whitish-ochreous, varied with black lunules, *as far as second median nervule*, where this colouring ceases abruptly—black occupying the remainder of the margin. *Hind-wing*: nervures mostly *whitish before middle*; the principal markings thinly edged with whitish; spots in, and on the edge of, discoidal cell as in ♂, but more contracted; a conspicuous, irregular, whitish marking on costa about middle; and a smaller, quadrate, creamy-white spot on costa before it, touching costal nervure; inner-marginal portion, covering abdomen, thickly irrorated with bluish-grey and ochreous, and crossed by irregular, strongly-sinuate black-edged white streaks, that become obliterated towards middle of wing; *only one ocellate spot* visible, between second and third median nervules, coloured as above, but the thin yellow ring more distinct; a row of four sub-ocellate, metallic-green-dusted spots in a line with the ocellate spot, between nervules, parallel to hind-margin, as far as first subcostal nervule; hind-marginal band indicated by pale whitish-brown; metallic-bluish, or bluish-green, lunules, bordering hind-margin between first median nervule and anal angle, more confluent than on upper-side.

Boisduval's figure of the female differs a little from the South African specimens of that sex in my possession. It is considerably *larger*, and with *longer tails* to the hind-wings. On the *under-side of fore-wing* the costa is

not white-striped near base; and on that of hind-wing a strongly-angulated, pale-ochreous streak completely crosses wing a little beyond middle. Boisduval states, also, that the female insect does not differ from the male; but, however this may be in the individuals inhabiting Mauritius and Bourbon, the sexes in South Africa present numerous differences, as described above. This Butterfly strikingly resembles the European *P. Atalanta*, but is inferior in beauty to that fine species, the ochre-yellow bands but poorly replacing the bright-scarlet of the "Red Admiral." The latter, however, does not possess the tails on the hind-wings, that give a peculiar appearance to *P. Hippomene*. I twice saw this insect at Knysna, and on each occasion in the woods, but was unable to capture it. It appears to have been common in that district in the summer of 1859—60, as I have received a fine series of specimens taken by a correspondent there, who has kindly furnished me with the following note of its habits: "Common. Flying over cabbage and turnip beds in garden. October—April."

"Woods—May and June."—D'Urban, in litt.

Natal (C. Morland). Knysna (Miss Wentworth).—Coll. mihi.
 Butterworth, Kaffraria (J. H. Bowker).—Coll. S. A. Mus.
 Graham's Town. King William's Town, British Kaffraria.
 —Coll. W. S. M. D'Urban.*

"Bourbon and Mauritius."—Boisd.

Genus JUNONIA.

Junonia, Hübn.

Vanessa, Fab., Godt.

Salamis, Boisd.

IMAGO.—*Head* of moderate size: *eyes* smooth, prominent; *palpi* rather long, sharply pointed, ascending, generally convergent, scaly, sometimes more or less hairy; *antennæ* of moderate length, generally with a rather short, abruptly-formed club (in *J. Cloantha*, however, very gradually-formed). *Thorax* robust, ovate, rather sparingly clothed with hairs. *Wings* large, broad, variable in outline. *Fore-wing*: costa more or less arched, sometimes very strongly so; apical portion more or less produced, sometimes very prominent, with a strong projection on hind-margin at extremity of first discoidal nervule; hind-margin always more or less dentate and emarginate, with, in many species, a considerable projection at extremity of third median nervule; inner-margin nearly straight, or slightly emarginate about centre; discoidal cell generally closed by a slender nervule. *Hind-wing*: costa strongly arched at base, and more or less so throughout; hind-margin always more or less scalloped, sometimes simply rounded (without any marked projections), sometimes with a more or less elongate production of anal angle, and occasion-

* "Port Elizabeth: not very common."—D'Urban, in litt.

ally with a longer or shorter projection of hind-margin at extremity of first median nervule; inner-margins deeply grooved and entirely covering under-surface of abdomen; discoidal cell generally open. *Abdomen* short, compressed, rather slender.

LARVA.—Rather stout, almost of equal thickness throughout, *armed with strong branched spines*; sometimes with two short, similar spines on head.

PUPA.—Moderately angulated, with *raised tubercles on the back*, head slightly bifid. Sometimes hardly angulated, the anterior portions more rounded.

These characters of Larva and Pupa are descriptive of the figures of the early states of the Butterflies of this Genus on Plate V of Horsfield and Moore's "Catalogue of Lepidoptera in the Museum of the E. I. Company."

This extensive Genus comprises a considerable number of species, all, I believe, extra-European. Many are conspicuous for beauty of colouring, but delicacy and fineness of marking form their chief characteristic. The modification of form observable in many species seems to call for the establishment of distinct sub-genera; which has, indeed, been attempted by some authors. I think Boisduval's Genus *Salamis*, which includes the species with falcate fore-wings and hind-wings prolonged at anal angle, a well-founded and natural group. As above characterised, the Genus *Junonia* is known to possess eleven representatives in the South of Africa. They are insects of middle size (with the exception of *J. Anacardii*, Linn., which sometimes expands $3\frac{3}{4}$ inches), principally of deep rich colours, in which brown, red, and various shades of ochre predominate; though several are spotted with blue, and in one species, *J. Amestris*, Drury, blue is the predominant colour. All the eleven South African species are found at Natal—three indeed, *J. Ceryne*, Boisduv., *J. Pelasgis**, Godt., and *J. Hecate*, mihi, seem only to have been found in that region; and three species extend as far South as Knysna, on the sea-coast of the Division of George. They are strong fliers, as might be inferred from their structure, but are as bold in settling near the collector as the species of *Pyrameis*.

75. *Junonia* CEnone.

Papilio CEnone, *Linn., Syst. Nat.*, II, p. 770, n. 135.

„ „ „ *Mus. Lud. Ulr. Reg.* p. 274, n. 93.

* This species has since been sent me from British Kaffraria by Mr. D'Urban.

- Papilio CEnone, *Fab., Syst. Ent.*, p. 490, n. 206.
 „ „ *Cram., Pap. Exot.*, pl. 35, f. A, B, C.
 „ „ *Herbst, Bek. Ins.—Schmett.*, VII, pl. 178,
 [f. 1, 2, 3. 4.
 „ „ *Fab., Ent. Syst.*, III, 1, p. 90, n. 280.
 Var. Papilio Hierta, *Fab., Ent. Syst.*, III, 1, p. 90, n. 281.
 Junonia CEnone, *Hübner, Verz. Bek. Schmett.*, p. 34, n. 289.
 Vanessa CEnone, *Godt., Enc. Meth.*, IX, p. 318, n. 51.
 Var. Vanessa Hierta, *Godt., Enc. Meth.*, IX, p. 318, n. 52.
 Vanessa CEnone, *Boisd., App. Voy. de Deleg.*, p. 592.
 „ „ *E. Doubl., List. Lep. Brit. Mus.*, I, p. 78.
 Junonia CEnone, *Horsf. & Moore, Cat. Lep. Mus. E. I. C.*,
 [p. 140.

Expands 1 in. 9 lin.—2 in. 7 lin.

Black; a broad ochre-yellow patch in each wing; in hind-wing, a large, round blue spot.

♂. *Fore-wing*: ochre-yellow patch occupying middle of wing, extending from costa almost to sub-median nervure, and from middle of discoidal cell to hind-marginal border, deeply indented with ground-colour both on its upper and lower portion beyond middle—much paler in its central portion; near apex, on costa, a narrow, pale-yellow, transverse streak joins the large ochre-yellow marking, the point of junction being marked by a more or less apparent black spot, which is sometimes indistinctly ocellate; bordering apical portion of hind-margin three or four sub-lunular, dusky-whitish marks; cilia brownish, indistinctly varied with whitish. *Hind-wing*: a large, rounded, metallic-blue spot, shot with violet-pink, near costa about middle, its lower portion in discoidal cell, its upper edge touching costal nervure; beyond it, occupying anal-angular portion of wing, extending along hind-margin to before its middle, and almost to middle of inner-margin, a large, ovate, ochre-yellow patch, paler in its central portion; at anal angle, a curved, short blackish streak, and traces of a lunulate hind-marginal line; cilia as in fore-wing. *UNDER-SIDE*.—Strikingly dissimilar to upper-side. *Fore-wing*: black replaced by dull ashy-grey; ochre-yellow patch paler, ill-defined, commencing from base in discoidal cell; costa whitish-grey from base; two pairs of slightly ziczac, transverse, thin, black streaks in discoidal cell, each pair including a whitish-grey space; a sinuate blackish streak, from costa about middle to insertion of second median nervule, seems to mark extremity of cell; apex hoary-grey; the streak joining ochreous patch from costa whitish—the spot marking point of junction distinct; a blue-pupillate, round, black spot marks the lower indentation of the ochreous

patch. *Hind-wing* : hoary-grey ; three transverse, brownish, waved, sub-dentate streaks—one before, the second about, the third beyond, *middle*—the second of which is the most distinct and regular ; between the latter and the third are a few small blackish spots between nervules, arranged parallel to hind-margin ; ochreous patch very faintly indicated by a slightly yellowish tinge ; centre and hind-margin varied with narrow shadings of pale-brown ; in some specimens, a narrow, lunulate, brown streak bordering hind-margin ; no trace of the blue spot so conspicuous on upper-side.

♀. *Ground-colour not so intense a black as in ♂* : the blue spot in hind-wing smaller and much duller (the edges of it not so clearly defined). *Fore-wing* : basal half of discoidal cell dusted with ochreous scales, and with a short, indistinct, transverse, ochreous streak, situate a little within the large ochre-yellow patch ; which latter commences further from base than in ♂, does not extend so low, is more deeply indented with black both on its upper and lower edge, and contains a transverse black streak which, as on under-side of ♂, seems to indicate the extremity of discoidal cell ; the ocellate spot marking the junction of pale apical streak with ochreous patch, more distinct than in ♂, and blue-pupilled ; the lower black indentation of the ochreous patch is also marked with a larger ocellate spot, likewise blue-centred. *Hind-wing* : two small, black spots, sometimes blue-centred, in ochreous patch, one on its upper edge above discoidal nervule, the other between second and third median nervules ; the lunulate streak bordering hind-margin distinctly marked, blackish. *Fringe* of both wings as in ♂, perhaps more distinctly marked with whitish. *UNDER-SIDE*.—Quite similar to that of ♂, but more distinctly marked ; *the hind-wing a little more brownish in tint*.

A variety of the ♀ occurs, in which the blue spot on hind-wing is *wanting*.

December (b)—February (m). Again in April (c). “March (m)” — (Miss Wentworth).

Local. Waste ground, hill-sides, stubble-fields, marshes, &c. Rarely in woods.

This species, with its yellow and blue markings strikingly brought into contrast on a jet-black ground, is one of the most beautiful Butterflies in Southern Africa. It is widely spread over Africa and South Asia, as will be seen from the localities given below. I very rarely saw *Enone* at Knysna, but at Plettenberg Bay, in January and February, I found it very common in certain spots. A stubble-field, where grew a small low plant with violet flowers, was a favourite locality ; but the insect was most abundant in a grassy piece of marsh-land bordering the Bitouw river, where it delighted in the white flowers of an umbelliferous plant resembling the Wild Carrot. It is active on the wing, and ready to take flight directly one approaches.

Knysna, Plettenberg Bay.—Coll. mihi.

“Graham’s Town to King William’s Town” (W. S. M. D’Urban).*

Cape of Good Hope. Interior of South Africa. Port Natal. Sierra Leone. North India. Punjaub. Ceylon. China.—Coll. Brit. Mus.

Butterworth, Kaffraria (J. H. Bowker).

Ceylon (E. L. Layard).—Coll. S. A. Mus.

Natal—“universally”—Boisd., App. Voy. de Deleg.

76. *Junonia Clelia*.

Papilio Clelia, *Cram.*, *Pap. Exot.*, pl. 21, f. E, F.

“ ” *Fab.*, *Ent. Syst.*, III, 1, p. 91, n. 285.

Junonia Clelia, *Hüb.*, *Verz. Bek. Schmett.*, p. 34, n. 289.

Vanessa Clelia, *Godt.*, *Enc. Meth.*, IX, p. 317, n. 50.

“ ” *Boisd.*, *App. Voy. de Deleg.*, p. 592.

? Var. *Vanessa Epiclelia*, *Boisd.*, *Faune Ent. de Mad.*,
[pl. 7, f. 3.]

Expands 1 in. 11 lin.—2 in. 3 lin.

Allied to *J. Ceneone*. Black; with creamy-white markings; a large metallic-blue, violet-glossed spot in hind-wing. Fore-wing: two dull ferruginous-red, transverse streaks in discoidal cell, the outer streak closing cell; a little beyond extremity of cell is a short, slightly-curved outwardly, transverse, creamy-white band, extending obliquely to second median nervule, and divided into five portions by crossing nervules; an irregular creamy-white mark close to hind-margin, between first and third median nervules, almost touches the oblique band, and seems to form a continuation of it; an irregularly-shaped whitish spot close to costa, near apex; beyond it, two lunules of the same colour, slightly below it, which appear to form part of an otherwise almost obliterate row of lunules bordering hind-margin; an ocellate spot, black, with a blue centre and ringed with ferruginous-red, between first and second discoidal nervules, immediately below white spot, and another similar, rather larger and distinct, ocellus between second and third median nervules, immediately within white mark; fringe brownish-black, varied with white. Hind-wing: metallic-blue spot occupying the same position as in *Ceneone*, but larger; two ocelli like those in fore-wing—one immediately above discoidal nervule, close to blue spot—the other between second and third median nervules, and rather nearer hind-margin; two rows of conspicuous creamy-white lunules, between nervules, almost contiguous, border hind-margin;

* “Nearly throughout the year;—abundant.”—D’Urban, in litt.

fringe white, spotted with black at extremities of nervules. **UNDERSIDE.**—Very different, *much paler*; the apical portion of *fore-wing*, and whole of *hind-wing*, being *greyish, varied with clay-brown*. *Fore-wing*: ground-colour blackish; discoidal cell *pale orange-reddish*, crossed by two pale-bluish striæ, edged on both sides with black; a black streak marks extremity of cell, and is outwardly bounded by a bluish one; the three outermost striæ, viz.: two bluish and one red, prolonged a little below cell; large creamy-white marks as on upper-side, but smaller apical marks obsolete, or very indistinct; a thin brownish line from costa close to apex to hind-marginal creamy-white marking; two ocellated spots very indistinct, the upper one sometimes obsolete. *Hind-wing*: an irregular, wavy, brown or ferruginous-brown streak crosses wing, from costa to submedian nervure, before middle; beyond middle, two dentate, brown, transverse streaks, running parallel to hind-margin, enclose a pale clay-brown, rather broad band, usually irregularly-varied with dark- or ferruginous-brown, and containing more or less distinct traces of a row of five ocelli, consisting of blackish dots in brown rings, situate between second subcostal and third median nervules; hind-margin bordered with a lunulate line, slightly darker than the ground-colour.

♀. Differs but slightly from ♂; *not so black in ground-colour*. *Fore-wing*: red striæ in cell paler, duller, but more distinct; two ocelli larger, more conspicuous. *Hind-wing*: *blue spot not so brilliant*, often *much smaller*; ocellate spots large, very conspicuous. **UNDER-SIDE.**—*Fore-wing*: blue and red transverse streaks crossing discoidal cell prolonged almost to submedian nervure; apical markings more distinct. *Hind-wing*: usually more strongly marked; ocelli in band more conspicuous.

This beautiful species, so closely allied to *Enone*, yet so thoroughly distinct, seems confined to Africa and the adjoining island of Madagascar. *J. Enone* being recognised as sometimes occurring without the blue spot in the *hind-wing*, I do not consider that Boisduval's species *Epicletia* can hold good, considering that it is founded on the absence of the spot referred to, in certain female specimens taken in Madagascar, which were also considerably smaller than the ordinary examples. Boisduval, indeed, expresses his opinion that it may be but "a local modification" of *Clelia*; and the figure given on plate 7 of the "Faune Entomologique de Madagascar, &c.," confirms this idea.

Natal. King William's Town (W. S. M. D'Urban).—Coll. mihi.

Natal.—Coll. S. A. Mus.

Port Natal. Congo. Ashanti. Sierra Leone. Madagascar.—Coll. Brit. Mus.

Natal—"universally."—Boisd.

Butterworth, Kaffraria (J. H. Bowker).—Coll. S. A. Mus.

77. *Junonia Octavia*.

Papilio Octavia, *Cram.*, *Pap. Exot.*, pl. 135, f. B, C.

" " *Fab.*, *Ent. Syst.*, III, 1, p. 120, n. 369.

" " *Herbst.*, *Bek. Ins.*—*Schmett.*, VII, pl. 166,
[f. 3, 4.

Precis Octavia, *Hübner*, *Verz. Bek. Schmett.*, p. 33.

Vanessa Octavia, *Godt.*, *Enc. Meth.*, IX, p. 322, n. 60.

" " *Boisd.*, *App. Voy. de Deleg.*, p. 592.

Expands 2 in.—2 in. 5 lin.

Salmon-red, inclining to brick-red, with black borders and spots. *Fore-wing*: base rather broadly blackish, especially on inner-margin, extending as far as middle; costa bordered with black, narrowest about middle, becoming broad and suffused at apex; a broad, black, transverse stria in discoidal cell unites costal and inner-marginal black, leaving a spot of ground-colour between it and base; a similar, more waved, rather narrower streak occupies extremity of discoidal cell; a moderately-broad black border along hind-margin, containing two rows of small bluish lunules,—the outer row generally ill-defined, the inner almost always distinct; immediately beneath apical black is the first of a row of five round black spots parallel to hind-margin, between nervules, from first discoidal nervule to sub-median nervule; fringe black, conspicuously spotted with white. *Hind-wing*: base broadly blackish, extending in a broad band to middle of costa, where it ends abruptly, immediately below the termination of the inner-marginal black in *fore-wing*, occupying inner half of discoidal cell, and extending, less distinctly, parallel to sub-median nervule; a black streak, sometimes united to costal black, at extremity of cell; along hind-margin, a black border similar to that in *fore-wing*, but broader,—its two rows of bluish lunules usually more distinct than in *fore-wing*; a row of six round black spots, parallel to hind-marginal border, is continuous of that in *fore-wing*, extending from costa to third median nervule; towards inner-margin is a clothing of silky, ochreous hairs; fringe as in *fore-wing*. *UNDER-SIDE*.—*Much paler, more creamy in tint, with a glistening pinkish tinge*; black markings very similar to those of upper-side. *Fore-wing*: a tinge of pale-yellow on costa, particularly near apex, where there is no broad, blackish suffusion; the row of spots parallel to hind-margin commencing distinctly from costa, the first two spots increasing the number to seven; double row of bluish lunules more

conspicuous than on *upper-side*, whiter. *Hind-wing*: basal black containing four rather large, very conspicuous spots of the ground-colour, and dusted with blue scales, which form a transverse streak between costal and subcostal nervures near extremity of black; whitish-bluish lunules, in hind-marginal border, large and very conspicuous; row of black spots as on upper-side; inner-marginal region stained with ochre-yellow.

This species, with its slightly-angulated fore-wings, and generally well-dentated hind-margins, seems to unite the group of *Junonia* to which *Enone* and *Clelia* belong, to those more markedly angulated and falcate-winged species that follow. Its colouring, though not brilliant, is rich and effective; and the soft creamy smoothness of the under-side is very beautiful. It does not seem to be common in the Natal country—Boisduval remarking that he had only seen three specimens from that region.

Natal.—Coll. mihi, et Coll. S. A. Mus.

Zoolu. South Africa. Sierra Leone.—Coll. Brit. Mus.

“Moselekatze’s Country.”—Boisd.

78. *Junonia Ceryne*.

Salamis Ceryne Boisd., *App. Voy. de Deleg.*, p. 592, n. 68.

Expands 2 in.—2 in. 1 lin.

Brown; a broad, pale-ochreous, reddish-tinged band crossing both wings. *Fore-wing*: two short, pale-ochreous striæ cross discoidal cell, the outer of the two extending a little below median nervure; the broad, pale-ochreous band, tinged with reddish externally, occupies wing from about middle, is bifid on costa—being divided by a brown, curved mark, containing a row of four white spots; this row of spots continued towards inner-margin by three small black spots in ochreous band; a row of small blue crescents along brown hind-margin; fringe brown, spotted with white. *Hind-wing*: ochreous band of *fore-wing* continued across this wing to inner-margin before anal angle, and containing a row of five black spots; blue crescents and fringe as in *fore-wing*. UNDER-SIDE.—*Deep, rich ochre-yellow*. *Fore-wing*: transverse striæ in discoidal cell white margined with black; broad band white on its inner edge, which is also bordered with black; spots in band all white-centred; hind-marginal crescents white, instead of blue. *Hind-wing*: two white, black-ringed spots near base; band as in *fore-wing*, but its black spots not white-centred; hind-marginal crescents white.

This very prettily-coloured Butterfly has only been, hitherto, found at Natal. Its wings are angulated and dentated similarly to those of *J. Octavia*. Boisduval’s description of the species, though brief, is very correct.

Port Natal.—Coll. Brit. Mus.

“Amazoulu Country.”—Boisd.

79. *Junonia Amestris*.

Papilio Amestris, *Dru., Ill. Nat. Hist.*, III, pl. 20, f. 3, 4.

„ „ *Herbst., Bek. Ins.—Schmett.*, VII, pl. 177,
[f. 1, 2.

„ „ *Fab., Ent. Syst.*, III, 1, p. 117, n. 360.

Papilio Zingha, *Fab., Ent. Syst.*, III, 1, p. 117, n. 358.

Vanessa Emma, *Godt., Enc. Meth.*, IX, p. 315, n. 43.

Vanessa Amestris, *Godt., Enc. Meth.*,—*Suppl.*, p. 807.

„ „ *Boisd., App. Voy. de Deleg.*, p. 592.

Expands 2 in. 5 lin.—2 in. 11 lin.

Fore-wing rather sharply angulated on first discoidal nervule: *hind-wing* with a small rounded projection at anal angle.

Black, dusted with pale-violet blue, and with blue transverse bands; a transverse band of red spots in both wings, near hind-margin. Fore-wing: thickly irrorated with blue as far as middle; in discoidal cell the irrorations form three transverse striæ, separated from each other by streaks of the black ground-colour; a waved, irregular, sometimes interrupted, blue stripe crosses wing beyond middle, from costa to inner-margin; beyond it commences a transverse row of six spots parallel to hind-margin—the first two spots being conspicuously bluish-white and of small size—the remainder red (the first of which is small, the other three large, and excavate internally, where each is marked by a deep-black spot); beyond this row is another, of blue sub-lunulate spots; a line of thin blue lunules edge hind-margin: fringe black, white-spotted in indentations. Hind-wing: basal half dusted with blue; no striæ in discoidal cell; beyond middle, the blue and red stripes of fore-wing are continued across this wing to inner-margin before anal angle—the blue stripe becoming indistinct in its lower portion—the red consisting of seven conspicuous, internally black-dotted spots; row of lunulate spots and of hind-marginal lunules as in fore-wing, but larger; fringe white-marked in indentations. UNDERSIDE.—Glossy greenish-bronze, with transverse blackish striæ. Fore-wing: five sinuate, black transverse striæ in discoidal cell; a dull-blackish, ill-defined fascia beyond it, quite across wing; followed by another, sharply-defined outwardly, and marking the inner edge of the blue transverse stripe on upper-side; parallel to hind-margin, a row of small black rings (the third from costa conspicuously filled with white); inner-margin glossed with purplish; a dull-raddish stain near anal angle; two rows of indistinct blackish lunules along hind-margin. Hind-wing: much varied with indistinct blackish fasciæ in basal half; a

blackish streak, enclosing a greenish line, at extremity of discoidal cell; a much-dentated, irregular black line continues the well-defined one of *fore-wing* to inner-margin before anal angle; also, a row of five or six little black rings, continuous of that of *fore-wing*, as far as third median nervule; two rows of blackish lunules along hind-margin, less distinct than in *fore-wing*, but ending in a black mark at anal angle.

The South African specimens, referred to the species *Amestris*, present several differences in marking from the typical West African examples on which Drury founded the species. In the latter, the basal portion of the wings is *not* irrorated with blue; two of the stræ in discoidal cell of *fore-wing* are *red*, or tinged with red; the bands of spots are more irregularly waved; and the *under-side* is a good deal varied with *greyish*, with the bands of red spots often tolerably well-marked—though very much fainter and duller than above.

The contrast of red and blue in this handsome *Junonia* is very striking, and renders it impossible ever to mistake the insect. The blue irroration on the basal half of the wings, in the Natal specimens, greatly adds to their beauty; the latter apparently attain a larger size than those of West Africa.

Natal.—Coll. mihi, et Coll. S. A. Mus.

British Kaffraria.—Coll. W. S. M. D'Urban.*

Butterworth, Kaffraria (J. H. Bowker).—Coll. S. A. Mus.

West Africa. Sierra Leone. Port Natal.—Coll. Brit. Mus.

"Moselekatze's Country."—Boisd., in Deleg.

80. *Junonia Archesia*.

Papilio Archesia, *Cram.*, *Pap. Exot.*, pl. 219, f. D, E.

" " *Herbst, Bek. Ins.*—*Schmett.*, VII, pl. 175, [f. 5, 6.

" " *Fab., Ent. Syst.*, III, 1, p. 119, n. 363.

Apatura Archesia, *Hübner, Verz. Bek. Schmett.*, p. 35, n. 304.

Vanessa Archesia, *Godt., Enc. Meth.*, IX, p. 316, n. 47.

Salamis Archesia, *Boisd., App. Voy. de Deleg.*, p. 591.

Expands 2 in. 4 lin.—2 in. 5 lin.

Fore-wing more sharply angulated than in *Amestris*, and also with a further marked projection of outline on third median nervule: *hind-wing* much produced and elongated at anal angle.

Warm-brown, with a tinge of ochreous; *fore-wing* with blue strice, and a dull-red band crossing both wings. *Fore-wing*: three bluish, slender, transverse stræ, edged with black, in discoidal cell; a broader, sometimes ill-defined, inwardly black-edged, bluish streak, from costa just beyond extremity of cell; a whitish-violaceous stripe from costa

* "March to May. Said to be the commonest Butterfly in the Transkeian country."—D'Urban, in litt. Mr. Bowker's numerous captures of this lovely insect at Butterworth appear to confirm the above remark.

beyond middle becomes merged, on first median nervule, with a dull ochreous-red band parallel to hind-margin; this red band commences on costa, close to apex, with a narrow macular streak of dark-red (sometimes half-obiterated); a row of seven pale-bluish spots—all conspicuously *white-centred* except the first (and rarely the fifth)—parallel to hind-margin, four spots being before the dark-red streak from costa, and three *in* the red band; bordering hind-margin are two more or less distinct, lunulate, blue streaks; fringe dull-whitish, spotted with brown at extremities of nervules. *Hind-wing*: dull-red band, continuous of that in *fore-wing*, completely crosses wing from costa to inner-margin a little before anal angle, and contains five small, bluish-white, black-ringed spots, between first subcostal and third median nervules; a slightly darker shade externally bounds red band; and a dark-brown, dentated streak runs between band and hind-margin; anal angle irrorated with pale-blue scales; fringe as in *fore-wing*, but the brown marks not so distinct. *UNDER-SIDE*.—*Dark-brown* (varied with lighter-brown, and crossed by transverse greyish fasciæ) to beyond middle of both wings; where, in place of the dull-red band of the *upper-side*, is a whitish-ochreous one—the *inner* fork of the band, on costa, being the whitest portion—tinged with reddish or ochreous, particularly in *hind-wing*, and generally ill-defined outwardly; the row of spots common to both wings smaller than on upper-side, *without* bluish tinge, whitish, in brown rings; hind-margins varied irregularly with whitish-grey, particularly at apices and anal angles; two dark-brown, lunulate streaks more or less distinct and continuous, border hind-margins, the streaks in *hind-wing* occupying the same position as on *upper-side*; fringes duller than on upper-side.

The alliance between this elegant species and *J. Amestris* is beautifully evident on a comparison of the two insects—especially with regard to the *fore-wing*. *J. Archesia* is rather rare in collections, the specimens I know of having been brought from Natal only.* Cramer and Herbst both give Batavia in Java as its *habitat*; but it is probable that the Dutch may have obtained the species at the Cape on their homeward voyages from the East, and that it became confounded with their collections of Indian insects. In the Appendix to M. Delegorgue's Travels in South Africa, no remarks are made as to the rarity or plenty in which this species is found; the locality only is stated.

Natal.—Coll. S. A. Mus.

South Africa.—Coll. Brit. Mus.

King William's Town (W. S. M. D'Urban).—Coll. mihi.

* Since taken in British Kaffraria, by Mr. W. S. M. D'Urban; and in Kaffraria Proper by Mr. J. H. Bowker. "Fond of rocky situations: February to April."—D'Urban, MS.

"Pluto's Valley, Graham's Town."—W. S. M. D'Urban, in litt.

Butterworth, Kaffraria (J. H. Bowker).—Coll. S. A. Mus.

"Moselekatze's Country."—Boisd.

81. *Junonia Pelasgis*.

Vanessa Pelasgis, *Godt., Enc. Meth.*, IX, p. 820, n. 389.

Expands 2 in. 1 lin.—2 in. 4 lin.

Fore-wing but slightly angulated at extremity of first discoidal nervule, projection at extremity of third median nervule not so prominent as in *Archesia*; *hind-wing* with anal angle produced, but not so pointedly as in *Archesia*.

Dark-brown; *beyond middle, a pale-ochreous band tinged with salmon-red crossing both wings*. *Fore-wing*: some dull-reddish scales on costa near base; two irregular, sometimes half-obliterated, dull-red transverse striæ in discoidal cell—the inner stria externally, the outer internally, edged with a blue-dotted black line; a thin black line, inwardly edged with blue, at extremity of cell, and a more indistinct, similar stria a little beyond it; pale-ochreous band bifid on costa, the outer ray being very much narrower than the inner, macular, and more or less interrupted; immediately before the *outer* ray of the band are the first three of a transverse row of six white-centred black spots, parallel to hind-margin, of which the remaining three (as in the allied species) are in the ochreous band, near its outer edge—the last spot being above submedian nervure; close to hind-margin are two rows of lunular markings, scarcely paler than ground-colour, but the inner row more or less coloured with bluish scales; fringe brown, white-spotted in indentations of margin. *Hind-wing*: ochreous band continued across this wing, beyond middle, to a little before anal angle, on inner-margin, and containing five black dots, *not* white-centred, between first subcostal, and third median, nervules; two indistinct, slightly paler in tint, lunulate streaks, divided by a streak darker than ground-colour, border hind-margin; at anal angle is a faint-bluish mark; fringe as in *fore-wing*. *UNDER-SIDE*.—Of a *darker, duller brown* than above; the transverse band very conspicuous, *white*, with a creamy tint on its edges, and with a faint *violaceous* lustre. *Fore-wing*: some scarcely distinguishable, thin, dark, transverse lines in cell; between which lines are occasionally a few scattered whitish scales; row of spots conspicuous, the lowest one geminate; apex more or less clouded with white scales; double row of lunules distincter than on upper-side, some of them marked with white scales. *Hind-*

wing: spots in band as on upper-side; an ochreous-yellow tinge on inner-margin, at conclusion of band; lunular streaks as in *fore-wing*.

Though plainly-coloured, the sharpness and clearness of the pale bands in this species, well contrasted with the rich brown ground-colour, render it a handsome and conspicuous insect. The striking whiteness of the transverse bands on the under surface at once distinguish it from all the allied species.

King William's Town (W. S. M. D'Urban).*—Coll. mihi. Natal.—Coll. S. A. Mus.

Port Natal.—Coll. Brit. Mus.

82. *Junonia Pelarga*.

♂. *Papilio Pelarga*, *Fab., Syst. Ent.*, p. 513, n. 296.

Papilio Laodice, *Cram., Pap. Exot.*, pl. 138, f. G, H.

„ „ *Fab., Ent. Syst.*, III, 1, p. 93, n. 289.

Papilio Leodice, *Herbst., Bek. Ins.*—*Schmett.*, VII, pl. 171, [f. 6, 7.

Vanessa Laodora, *Godt., Enc. Meth.*, IX, p. 314, n. 38.

♀. *Papilio Pelarga*, *Drury, Ill. Nat. Hist.*, III, pl. 27, f. 1, 2.

Papilio Harpyia, *Fab., Mant. Ins.*, II, p. 104.

Papilio Trullus, *Herbst., Bek. Ins.*—*Schmett.*, VII, pl. 169, [f. 6, 7.

Papilio Pelarga, *Stoll, Suppl. Cram. Pap. Exot.*, pl. 27, [f. 2, 2a.

Vanessa Pelarga, *Godt., Enc. Meth.*, IX, p. 313, n. 37.

Salamis Pelarga, *Boisd., App. Voy. de Deleg.*, p. 592.

Expands 2 in. 2 lin.—2 in. 4 lin.

Fore-wing strikingly produced at extremity of first discoidal nervule, being quite falcate,—projection on third median nervule well-marked; *hind-wing* with anal angle so much produced as to form a short, abruptly-ending tail.

♂. *Dark-brown*; *beyond middle an ochreous, red-tinged band common to both wings, not bifid on costa of fore-wing*. *Fore-wing*: two transverse, red-ochreous, striae in discoidal cell, edged with blue-powdered black lines; a bluish stria beyond cell; the ochreous band strongly tinged with *dull-reddish* along its outer edge, and deeply indented on its inner edge; a row of seven spots parallel to hind-margin, the first four bluish-white, bordering apical portion of margin,—the remaining three black, *in the ochreous band, near its outer edge*,—(the last spot above sub-median nervule); beyond these, a row of bluish lunules, succeeded by a row of very indistinct darker marks, borders hind-margin. *Hind-wing*:

* "Mowbray Park, Keiskamma Hoek.—A mountain and forest-haunting species, occurring from March to end of May."—D'Urban, in litt.

occasionally a reddish spot in discoidal cell, near its extremity; ochreous band of *fore-wing* continued broadly across this wing to inner-margin, where it is adorned with a patch of *white hairs*, and containing a row of five black dots between first sub-costal, and third median, nervules; a row of bluish lunules as in *fore-wing*, and indications of an indistinct outer row of the same, both rows ending in a large blue lunule at anal angle,—the tail-like projection on which is also powdered with blue scales. UNDER-SIDE.—Dark-ochreous, varied with *dull-reddish*, and with *ashy-bluish* transverse striæ. *Fore-wing*: transverse band well-indicated by a *yellow stripe*, with a space of similar hue immediately beyond it, containing the row of spots as on upper-side, but black, and the greater portion white-centred; before band are several irregular, transverse, ashy-bluish striæ; and near and parallel to hind-margin is a streak of the same colour. *Hind-wing*: band as in *fore-wing*, the spots therein mostly white-centred; projection at anal angle black, irrorated with blue.

♀. Similar in arrangement of marking; but the portion of the transverse band that in the ♂ is ochreous is in this sex pale violaceous-bluish, forming a most striking contrast to the red of its outer edge. *Fore-wing*: in many specimens, the red of the band throws out a narrow macular stripe, from first median nervule to costa close to apex, immediately beyond the white spots. UNDER-SIDE.—Redder, less variegated than in ♂, sometimes almost unicolorous, but the markings similar in arrangement.

The sexes of this handsome species present at first sight a very different appearance, but this is entirely owing to the *bizarre* effect produced by the violet-bluish tint in contrast with the red, in the transverse band of the female. A short comparison will convince any-one of their specific identity. Drury's figure of the ♀ *Pelarga* is too highly coloured; and his representation of the under-side shows a variety remarkably devoid of the characteristic markings, with the exception of the yellow streak indicating the internal edge of the transverse band.

Zoolu? West Africa. Sierra Leone.—Coll. Brit. Mus.
"Port Natal."—Boisd. in Deleg.

83. *Junonia Cloantha*.

Papilio Cloantha, Cram., *Pap. Exot.*, pl. 338, f. A. B.

Papilio Cloanthe, Herbst, *Bek. Ins.*—Schmett., pl. 176,
[f. 3, 4.

Vanessa Cloantha, Godt., *Enc. Meth.*, IX, p. 322, n. 61.

Salamis Cloantha, Boisd., *App. Voy. de Deleg.*, p. 591.

Vanessa Cloantha, Chenu, *Enc. d'Hist. Nat.*—Pap., pl.
[26, f. 3.

Brighter or duller warm orange-ochreous; with transverse black streaks, and blue-centred black ocelli.

♂. A *splendid purple lustre*, strongest over basal half of wings, is visible in certain lights. *Fore-wing*: base clouded with black, narrowly so on costa, more widely on median nervure, and extending nearly to middle on inner-margin; two moderately-broad, transverse, black streaks in discoidal cell, the outer one closing cell: a similar streak beyond middle, between sub-costal nervure and first median nervure, which, interrupted on the *latter* nervure, is continued thence by an irregular streak, inclining inwardly, to sub-median nervure, where it joins the black clouding from base; in some distinctly-marked specimens, the streak closing cell is also, though interrupted at insertion of second median nervure, produced to join basal black; beyond the *striæ*, a black mark on costa commences a row of six black, blue-centred ocelli, of which the first three are contiguous, the largest and lowest ocellus being between second and third median nervules,—the line of spots being parallel to hind-margin; beyond ocelli, a transverse, thin, interrupted, macular, black streak, broader and more continuous on costa and close to anal angle; costa and hind-margin closely hatched with very thin, minute, short, transverse lines; occasionally, this hatching is wanting on hind-margin, when there is an irregular black streak closely bordering hind-marginal edge. *Hind-wing*: more or less broadly clouded with black at base, the black occupying most of discoidal cell, at extremity of which is a sub-ovate black spot; this spot is occasionally united to basal black by a thin, black line along discoidal nervule; near and parallel to hind-margin, a row of six ocelli similar to those of *fore-wing*, but much larger (except the ocellus next anal angle, which is always small, and sometimes very minute), situate between nervules from first subcostal to submedian nervure; macular streak of fore-wing continued across this wing, in a more lunulate form, dusted with bluish scales, and ending in a thickly blue-dusted mark at anal angle; specimens possessing the exterior hind-marginal streak in *fore-wing*, have it likewise bordering hind-marginal edge of hind-wing. Fringes of both wings hoary-greyish. UNDER-SIDE.—*Paler or darker dull ochreous-brown (rarely pale greyish-ochreous)*, the markings of upper-side narrowly and faintly reproduced in *slatey-black*. *Fore-wing*: no basal black; some short, strong, *pale-yellowish hairs* on costa near base; *striæ* in discoidal cell *outlined* only with slatey-black, but darker than ground-colour ocelli mostly indistinctly marked, *not* blue-centred, but with *a few, minute, pale-yellowish hairs springing from their centres*;

at anal angle, and more rarely at apex, is a whitish-violaceous tinge. *Hind-wing*: a small slatey-black spot in discoidal cell; an irregularly-waved, slatey streak, crossing wing before middle, closes cell; a similar, but more regular stria beyond this, and continuous of the third stria in fore-wing, extends nearly to anal angle; ocelli very indistinctly defined, much smaller than on upper-side, rather conspicuously tufted in their centres with pale-yellowish hairs; similar, but longer, hairs are scattered over base and margins of wing, but are most abundant and longest on *inner-marginal portion covering abdomen*; a bluish tinge at anal angle.

A specimen with very pale under-side, in my collection, has the *ocelli* much distincter and bluer than above described without any hairs in their centres; these hairs are, indeed, almost universally wanting, except a few near bases of wings.

♀. *Without* the rich purple lustre of ♂; but markings quite similar to those of the other sex. Ocellate spots in both wings larger, and comparatively with *more blue*. UNDER-SIDE.—Quite like that of ♂.

Fore-wing somewhat truncate, slightly angulated on lower discoidal nervule; *hind-wing* angulated on discoidal nervule, and with anal angle produced into an elongate, rounded projection.

Local: not uncommon where it occurs. Grassy kloofs and hollows on hill-sides; among long grass in fields.

September (e) to February (m). "October to April: abundant."—D'Urban, MS.

This handsomely-marked Butterfly was very rare at Knysna during my stay there, only a single specimen ever being taken by me in that locality. At Plettenberg Bay, the species is common, particularly about the beginning of February. Its habits are precisely those of a true *Vanessa*,—presenting the same combination of wariness and boldness. I found that, if I struck at one while passing and missed it, the insect almost invariably re-passed me almost immediately; and, if I remained standing quietly, would, though apparently much flurried, fly backwards and forwards repeatedly over the same ground. If, however, I gave chase, its flight would generally be long-sustained in one direction. I have seldom seen *Cloantha* on flowers,—it usually alights on the ground, or on the lowest plants. Few Butterflies are more beautiful and conspicuous than this species, when the sunlight falls on its expanded wings, brightening the contrast of the blue ocellate spots with the warm ochre of the ground-colour,—while a sudden movement of the wings perhaps reveals the exquisite purple sheen, that plays over their surface in the male-insect.

Knysna. Plettenberg Bay.—Coll. mihi.

Butterworth, Kaffraria (J. H. Bowker). Natal.—Coll. S. A. Mus.

Port Natal. West Africa.—Coll. Brit. Mus.

Graham's Town. King William's Town.—Coll. W. S. M. D'Urban.

"Amazoulu Country."—Boisd. in Deleg.

84. *Junonia Hecate*.

Junonia Hecate, *mihi*.—N. Sp.

Expands 2 in. 2 lin.—2 in. 5 lin.

Fore-wing moderately falcate, the projection of outline being at extremity of first discoidal nervule,—at extremity of third median nervule is also a moderate projection; *hind-wing* rather acutely angulated at extremity of discoidal nervule, and produced considerably at anal angle into a blunt process.

Dull greyish-brown, with dull ochreous-red transverse strizæ and ocellated spots; four conspicuous, pure-white spots near apex of fore-wing. Fore-wing: two ochreous-red, blackish-edged strizæ across discoidal cell, the outer one closing cell; a broad space on costa, commencing a little beyond extremity of cell, is much darker than rest of wing, and contains three pure-white spots, arranged transversely from first sub-costal, to first median, nervule; a dark stripe, including an indistinct dull-red one, extends from first median nervule, immediately before the lowest white spot, to a little beyond middle of inner-margin; a small pure-white spot, on costa close to apex, commences a row of blackish spots parallel to hind-margin, between nervules, as far as sub-median nervule, the two lowest spots the largest, and always surrounded by an ochreous-red ring, wider on the inner-side,—the other spots occasionally in indistinct smaller rings,—some of them generally with minute bluish pupils; beyond these ocellate spots are two dark-brown or blackish lunulate strizæ bordering hind-margin; fringe varied with white and brown. *Hind-wing:* a transverse, dull ochreous-red, black-edged stria about middle of discoidal cell, composed of two small spots, and a similar stria at extremity of cell; the dark stripe of fore-wing, enclosing a dull-red one, is continued across this wing, gradually narrowing towards inner-margin, where, a little before anal angle, it becomes obsolete; beyond it, a transverse row of more or less conspicuous ochreous-red ocelli, with blue-dotted black centres, five in number, situated between first sub-costal nervule and submedian nervule,—the last spot the largest and brightest, and in a distinct, thin, yellow ring; two dark-brown, lunulate streaks beyond ocelli, parallel to hind-margin, but more continuous than in *fore-wing*,—darker at anal angle, where there is a slight irroration of blue-grey scales; fringe brown, lightly marked with white. **UNDER-SIDE.**—*Very variable:* ground-colour commonly *much paler* than on upper-side.—*Fore-wing:* an additional dull-red mark in discoidal cell, at base; three white spots beyond cell,

in darker portion, rather larger, commonly contiguous,—the row continued to third median nervule by two pale markings, immediately beneath which is a large, whitish spot; a little *before* this spot, and likewise immediately beneath third median nervule, is a similar, slightly smaller whitish spot; ocellate spots distincter than above, particularly the two immediately below small white costal spot,—the *two lowest ones rounder*, in thin yellow rings; hind-margin varied with whitish-grey. *Hind-wing*: sometimes, an additional, basal, dull-red mark in discoidal cell, the other transverse marks frequently extending above and below cell; some indistinct, darker, waved stræ cross wing *before* middle; just *beyond* middle, a more or less distinct, dull-red, outwardly dark-margined streak crosses from costa to inner-margin a little before anal angle; ocelli mostly rather conspicuous; streaks beyond, parallel to margin, tinged with *blue*, especially near anal angle; the hind-margin more or less varied with violaceous or whitish-grey.

In some specimens the *under-side is much suffused* and the *markings indistinct* and *without* the usual red tint; the transverse stripe on hind-wing is, however, very conspicuous, and commences with two white markings on costa. In others, the *under-side is much tinged with a bronzey lustre*, and with the ocellated spots *scarcely visible*.

This plainly-coloured, but elegant, insect appears to be only known from the vicinity of Natal, where it would seem to be not uncommon.

Natal. (Guienzius and Aldrich).—Coll. mihi.

Natal.—Coll. S. A. Mus.

Port Natal.—Coll. Brit. Mus.

85. *Junonia Anacardii*.

Papilio Anacardii, Linn., *Syst. Nat.*, II, p. 758, n. 74.

„ „ „ *Mus. Lud. Utr. Reg.*, p. 236,
[n. 55.]

Papilio Parrhasus, Dru., *Ill. Nat. Hist.*, III, pl. 4, f. 1, 2.

Papilio Anacardii, Fab. *Ent. Syst.*, p. 467, n. 105.

Vanessa Aglatonice, Godt., *Enc. Meth.*, IX, p. 299, n. 8.

Cynthia Anacardii, Bois., *App. Voy. de Deleg.*, p. 591.

Expands 2 in. 6 lin.—3 in. 9 lin.

Fore-wing strongly falcate at extremity of first discoidal nervule, and with a considerable prominence of outline at extremity of third median nervule; *hind-wing* with a short, moderately-wide, rather acute, tail-like projection on first median nervule, anal angle produced into a pointed projection.

Very pale greenish, or greenish-white ; shot with a brilliant rosy-violet lustre, more vivid in ♂, giving a "mother-of-pearl"-like aspect to the wings ; spotted and margined with blackish.

Fore-wing : costa thinly powdered with minute blackish atoms to slightly beyond middle, where commences a narrow, blackish edging, rapidly widening to apex, where it forms a rather broad bordering ; hind-margin also bordered with blackish, which, wide at apex, gradually narrows to anal angle, where it is sometimes very indistinct ; from sub-costal nervure are two short, transverse, thin, slightly waved streaks, one crossing discoidal cell about its middle, the other closing cell, —from first sub-costal nervule, a little beyond extremity of cell, is a third streak to first median nervule ; these three streaks are all liable to be very indistinct, or even *obliterated* in their lower portion, but the streak *beyond cell* is always continued to inner-margin about middle by a very faint, thin, grey line ; near apex, between the two discoidal nervules, a rounded, blackish spot, sometimes united to apical blackish ; two other black spots beyond middle, one above, the other below, third median nervule, —the upper spot the larger, and centred with violet-blue, (which centre is sometimes edged inwardly by a red crescent) ; two blackish dots, between this ocellate spot and the blackish spot near apex, complete the transverse row of spots ; close and parallel to hind-margin, a row of larger or smaller blackish spots, between nervules, sometimes *united* to hind-marginal blackish. *Hind-wing* : beyond middle, parallel to hind-margin, between costal nervure and third median nervule, a row of six black spots, of which the first and second are of moderate size and *not* ocellate, —the third larger, with violet-blue pupil and red lunule, —the fourth and fifth blackish only (rarely red-centred), very small, or sometimes altogether obsolete, —the sixth large, very distinct, containing a violet-blue-pupilled, red centre, in a conspicuous *yellow ring* ; beyond these, also between nervules, a row of thin, blackish, lunulate marks, from costa to anal angle, strongest in the ♀, —the thickest lunule being at anal angle, and in some specimens broadly suffused with blackish internally ; the thin, grey line of *fore-wing* continued obliquely across this wing to inner-margin, a little before anal angle ; a blackish streak bordering hind-margin, which is also thinly irrorated with blackish atoms. UNDER-SIDE. — *Paler, glistening* somewhat iridescent, but *without* the rich lustre of *upper-side* ; *blackish markings reduced to very thin lines and dots* ; thin line crossing both wings distinct and black. *Fore-wing* : two pale, slightly pinkish, thinly black-edged, rather broad, transverse stripes, from costa before middle to just above

submedian nervure, where the *outer black edging* of the stripe nearest middle meets the thin black line from costa, forming a spot,—while its *inner edging* forms a similar spot with the outer black edging of the stripe nearer base; on the *inner* side of the thin transverse line, a minute irroration of black atoms, and bordering it *externally* is a whitish, pink-tinged stripe; spot near apex in the same position as on *upper-side*, but *pale-yellow*, with a violet-pupilled red centre, and in a thin black ring; spot *above* third median nervule also of these colours, and conspicuous, but spot *below* that nervule small and not clearly marked; hind-marginal row of spots represented by a very thin, wavy, often interrupted line; a slight, *pale-brownish tinge* on hind-marginal edge. *Hind-wing*: marked very similarly to *fore-wing*; *only one* indistinct pale band before middle, not defined on its *inner* side; blackish irrorations, bordering inner edge of black transverse line, more thickly sprinkled than in *fore-wing*; only two ocellated spots visible, more conspicuous than those in *fore-wing*, but of the same colours, situated, respectively, between second subcostal and discoidal nervules, and between third median nervule and submedian nervure.

The *Anacardii* of Fabricius would seem to be distinct from Linné's species, as he describes it (Syst. Ent., p. 467) as probably only a variety of *P. Piera*, Linn., one of the peculiar, transparent-winged Butterflies of the Genus *Hætera*, Fab., a group of South American *Satyridæ*. The figure of *Anacardii* given by Herbst, too (Nat. Bek. Ins.—Schmett., V, pl. 84), represents a Butterfly closely allied to *Piera*, but larger, and with more rounded hind-wings; but this author expresses some doubt of his insect's being identical with that of Linnæus. The description given by Linnæus in "Museum Ludovicæ Ultricæ Reginæ, &c.," is certainly applicable to the insect I have described above, but he has confounded the species with the Surinam insect figured by Madame Merian, and erroneously gives America as its *habitat*. It is curious that Drury, who has figured this *Junonia* under the name of *P. Parrhasus*, makes no reference whatever to Linné's *Anacardii*, but states the species, received by him from West Africa, to be "an undoubted nondescript."

This Butterfly, one of the largest and most beautiful found in Southern Africa, appears to be not uncommon at Natal; but nothing is recorded of its peculiar haunts or habits, nor of the appearance or food-plants of its Larva. In geographical range, it is confined to the African continent, where it is, however, widely distributed.

Natal.—Coll. mihi (Aldrich); et Coll. S. A. Mus.

Port Natal. Ashanti. Sierra Leone.—Coll. Brit. Mus.

"Port Natal."—Boisd., in Deleg.

Genus MYSCELIA.

Myscelia (Boisd. MS.), *E. Doubl.*
Crenis, *Boisd.*

IMAGO.—*Head* small, narrower than thorax, thickly clothed with hair; *eyes* smooth, prominent; *palpi* rather long, projecting considerably beyond head, directed upwards, convergent at tips; *antennæ* rather long, slender, with a gradually-formed, compressed club. *Thorax* rather narrow, moderately hairy. *Fore-wings* with costa moderately arched; apical portion moderately produced, somewhat truncate; hind-margin slightly concave in middle; inner-margin nearly straight, very slightly concave; *costal and median nervures much swollen from base almost to middle*. *Hind-wings* with costa very convex at base, and from thence almost straight; hind-margin rounded, moderately sinuate-dentate. *Legs* of moderate size. *Abdomen* slender, about two-thirds the length of the inner-margin of hind-wing.

This Genus is remarkable for the swollen or dilated nervures in the fore-wing, a character that is one of the most marked in the Family *Satyridæ*. The slender structure and dull-brownish hue of the only South African species increase its *Satyriiform* aspect, and render one doubtful whether to consider it as a true member of the *Nymphalidæ*, to class it with the *Satyridæ* themselves, or to include it in the *Eurytelidæ*. I think it presents a considerable affinity to the last-named Family.

86. *Myscelia Natalensis*.

Crenis Natalensis, *Boisd.*, *App. Voy. de Deleg.*, p. 592.

Expands 1 in. 10 lin. — 2 in. 1 lin.

♂. *Dull ochreous-brown*. *Fore-wing*: unicolorous, with only the faint indications of a transverse row of darker spots near hind-margin. *Hind-wing*: an ochreous tint prevails towards hind-margin, which has an edging of thin lunules, darker than ground-colour; beyond middle, parallel to hind-margin, a row of five small, rounded, blackish spots, between nervules. UNDER-SIDE.—*Paler*. *Fore-wing*: dull-ochreous, somewhat glistening; on costa, a little before middle, an obliquely-transverse, dark streak, inclining *outwards* as far as first median nervule; immediately beyond streak, a dusky, ill-defined, darker space; apical portion *pale yellowish-greyish*, with four elongate, black spots near the inner edge of the greyish colouring; a row of seven dusky-blackish, short streaks, parallel to hind-margin, not reaching to anal angle. *Hind-wing*: *pale yellowish-grey*; before middle, a broad,

irregularly-shaped, violet-grey fascia, with brown edges; beyond middle, a row of seven contiguous, ocellated spots, violet-grey, black-centred, in golden-brown rings—on inner-margin is an indistinct, smaller, eighth ocellated spot, *without* a black centre, a little *before* the row of spots; beyond these, a thin, dark streak, parallel to hind-margin, composed of united lunules.

♀. *Considerably larger than ♂, but similar in colouring, the markings broader, paler, and more distinct. Fore-wing:* shaded with blackish in apical portion, from extremity of discoidal cell, with an *oblique, dull orange-ochreous stripe*, interrupted on first median nervule, from costa about middle to second median nervule not far from hind-margin; nearer apex is a much shorter, narrower, paler, and less distinct stripe, parallel to the larger one. *Hind-wing:* a reddish-ochreous tint pervades the whole surface, but is strongest near hind-margin, where the row of black spots is conspicuous, and the brown along hind-margin forms a distinct border to the wing. *UNDER-SIDE.—Fore-wing:* *warm yellow-ochreous*; the dusky oblique markings from costa in this sex assume the form of two conspicuous blackish stripes; colouring at apex *much paler* than in ♂, *yellowish-white*, varied with pale-brownish, the black spots very conspicuous. *Hind-wing:* ground-colour *yellowish-white*; fascia before middle much paler than in ♂, its brown edges conspicuous; row of contiguous ocellated spots much paler, their black centres very conspicuous.

D'Urban, Natal (R. C. Jones).—Coll. mihi.

Port Natal.—Coll. Brit. Mus.

"Bay of Port Natal."—Boisd.

Genus NEPTIS.

Neptis (Fab. Syst. Gloss.), *Horsf.*

Limenitis (pars), *Boisd.*

Acca, *Hübner*.

Nymphalis, *Godt.*

IMAGO.—*Head* rather broad, moderately hairy on forehead; *eyes* large, prominent; *palpi* short, acute, slender, hairy, not rising above level of forehead; *antennæ* moderately long, terminating in an elongate, gradually-formed club, flattened on its upper surface. *Thorax* not robust, as broad as head, slightly hairy posteriorly. *Fore-wings* elongate, rather truncate; costa but slightly arched; apex not acute, but well-

marked; hind-margin slightly convex and sinuated; anal angle distinct; inner-margin convex near base, slightly concave about middle. *Hind-wings* large, rounded; costa strongly arched; hind-margin moderately dentate; inner-margins but slightly convex, not covering posterior portion of abdomen. *Legs* rather short and stout. *Abdomen* slender, much compressed, rather elongate.

LARVA.—*Head* very large, bifid on its summit; a pair of downy, elongate, *tubercular processes*, projecting laterally, on both the second and third segments—those on the third segment much the longer; an upright pyramidal process on the penultimate (?) segment. The Larva is somewhat *attenuated posteriorly*.

PUPA.—*Much curved*; thick in central portion; head deeply bifid.

These characters of Larva and Pupa of *Neptis* are descriptive of the figures of the early states of *N. Aceris* in Horsfield and Moore's "Catalogue of Lepidopterous Insects in the Museum of the H. E. I. Company," pl. V, f. 10, 10a.

The insects included in this Genus, which is nearly allied to *Limenitis*, Fab., are marked conspicuously with white or yellow on a black ground. Only one species, *N. Melicerta*, Fab., is known to inhabit South Africa. It is an elegant Butterfly, the snowy-white markings rendering it very conspicuous.

A yellow-banded species, *N. Dumetorum*, common in the Isle Bourbon, is likely to be also an inhabitant of Natal.

87. *Neptis Melicerta*.

Papilio Melicerta, *Fab.*, *Syst. Ent.*, p. 508, n. 274.

Papilio Agatha, *Cram.*, *Pap. Exot.*, pl. 327, f. A, B.

Papilio Agathe, *Herbst. Bek. Ins.*—*Schmett.*, IX, pl. 238, [f. 7, 8.

Papilio Melicerta, *Fab.*, *Ent. Syst.*, III, 1, p. 244, n. 762.

Acca Blandina, *Hübner, Verz. Bek. Schmett.*, p. 44, n. 389.

Nymphalis Melinoë, *Godt.*, *Enc. Meth.*, IX, p. 432, n. 261.

Expands 1 in. 9 lin.—2 in. 4 lin.

Brownish-black, with a reddish gloss; with pure-white transverse bands. *Fore-wing*: a slightly curved, rather broad, white band, composed of six contiguous spots, beyond middle, extending from costa to third median nervule not far from hind-margin; on inner-margin, a little before the end of band, a semicircular white spot, crossed by submedian nervure; along hind-margin three rows of paler markings, thin, lunular, partly white; the two first spots of the innermost

row being larger and whiter than the rest ; between the latter row and white band is a series of rather large, almost contiguous, quadrate marks, darker than ground-colour, and forming a stripe parallel to hind-margin ; from three to seven pure-white dots in discoidal cell, and one or two just beyond extremity of cell. *Hind-wing* : a broad white stripe, continuous of the inner-marginal, semicircular mark on *fore-wing*, divided into seven by crossing nervules, occupies central portion from costa to inner-margin, being curved, parallel to hind-margin ; series of dark spots broader than in *fore-wing* ; three thin, lunular, pale streaks bordering hind-margin as in *fore-wing*. Fringes of both wings conspicuously marked with white between denticulations. UNDER-SIDE.—*Very similar, ground-colour paler.* *Fore-wing* : costa white close to base ; a short, white, longitudinal streak from base, in discoidal cell, bordering sub-costal nervure ; five or six white dots in cell, and a transverse row of three from costa, a little beyond cell ; white band and marking as on upper-side ; three rows parallel to hind-margin conspicuously white, and forming almost *continuous* streaks ; the three first spots of the innermost row larger than on *upper-side*, longitudinally triangulate. *Hind-wing* : three white bands in basal portion—a broad one *edging costa* to a little before middle—a narrow one, parallel to the first, commencing on inner-margin—and a broad one, also parallel and from inner margin, which is *broken into three spots* towards costa ; central band as on *upper-side* ; lunulate streaks bordering hind-margin conspicuously white. Fringes as on *upper-side*.

I know nothing of the habits of this strikingly marked species ; but I have no doubt of its being a woodland insect. This Butterfly is not the *Melicerta* of Drury, though named as such in the British Museum ; and, though Fabricius refers to Drury's figures (on pl. 19 of his second Volume) in his "Systema Entomologiæ," his own description does not by any means accord with them. Drury's species has a broad, longitudinal white band in discoidal cell of *fore-wing*, from the base—which is entirely wanting in our species (the latter having only some *white spots* near base, as described by Fabricius) ; and has the transverse white band in the same wing interrupted in *five* places, instead of in *one*, as in the Fabrician *Melicerta*. Fabricius having thus confused the two insects, it is perhaps advisable to adopt Cramer's name of *Agatha* for his *Melicerta*.

Natal—Coll. mihi (Guienzius) ; et Coll. S. A. Mus.

Port Natal. Sierra Leone.—Coll. Brit. Mus.

Genus *ATHYMA*.*Athyma*, *Westw.**Biblis*, *Fab.**Acca*, *Hübner*.*Nymphalis*, *Godt.**Limnitis*, *Boisd.*

IMAGO.—*Head* rather broad: *eyes* prominent, naked; *palpi* short, acute, scarcely rising above forehead, more prominent than in *Neptis*, and not so slender; *antennæ* as in *Neptis*. *Thorax* more robust than in *Neptis*, and more thickly clothed with short hairs anteriorly and posteriorly. *Forewings* very similar in outline to those of *Neptis*, perhaps not so elongate: hind-margin usually slightly concave about middle; inner-margin straighter than in *Neptis*, being little, or not at all, excavate. *Hind-wings* less rounded than in *Neptis*: dentations of hind-margin stronger; anal angle marked and prominent; inner-margins more convex, and forming a more complete groove. *Abdomen* stouter than in *Neptis*, and not so elongate.

LARVA.—*Almost of equal thickness throughout*; armed with branched spines of various length; *head* sharply serrated along its upper edge, large, and somewhat pushed forward, as in *Neptis*.

PUPA.—*Two curved protuberances on the back*,—one on thorax, the other at base of abdomen; *head* very acutely bifid.

These characters, of the earlier states of the insects comprised in this Genus, are taken from the figures of the Larva and Pupa of *A. Lencothoë*, Linn. in Plate V of Horsfield and Moore's Catalogue of Indian Lepidoptera.

My authority for giving this Genus as South African consists of a single specimen of a Butterfly in the British Museum, which I have no hesitation in referring to the *Limnitis Saclava* of Boisduval, (now included in the Genus *Athyma*), which was discovered in Madagascar by M. Goudot. The specimen in the British Museum is labelled as from Natal, where it was, I believe, taken by M. Guenzius. This, the only known South African species, seems closely allied to *Neptis*, not possessing such robustness of body as is presented by its congeners.

88. *Athyma Saclava*.

Limnitis Saclava, *Boisd.*, *Faune Ent. de Mad.*, &c.,
[p. 49, n. 1.

Athyma Saclava, *Chenu*, *Enc. d'Hist. Nat.*—*Pap.*, p. 152,
Expands 1 in. 8 lin. [f. 248.

Brownish-black, with white bands and spots. Fore-wing: on costa beyond middle, not far from apex, three white spots of moderate size, forming a short band inclining towards hind-margin; below them, between first and third median nervules, a large, somewhat quadrate, white spot, divided almost equally by the second median nervule; immediately below the latter marking, and a little nearer base, is a semi-circular, moderately-sized, white marking on inner-margin; *in* discoidal cell, three white dots—at *its extremity* a dark-margined, pale, transverse streak,—*just beyond* extremity, three white dots; bordering hind-margin, three parallel rows of whitish lunules—the outer row very indistinct; between the innermost of these lunular rows and the large white spots, is a row of spots *darker* than the ground-colour; close to the outer edge of the white spots are a few minute, white, thin spots—two or three of which are situate *between* the large white markings. *Hind-wing:* a compact white band, almost straight on its *inner* edge, crosses about middle, from costa to inner-margin, and is continuous of the semi-circular marking on inner-margin of *fore-wing*; row of darker spots as in *fore-wing*, but more distinct; rows of lunular marks almost obsolete. UNDER-SIDE.—*Pale-ochreous, varied with ferruginous-brown*; white bands and spots as on upper-side. *Fore-wing:* costa at base ochreous-white; four whitish, brown-margined, spots in discoidal cell, and a streak, similarly coloured, at its extremity; portion around white spots ferruginous-brown, with blackish rays *between nervules*; row of darker spots, beyond white ones, blackish; between the rows of white lunules bordering hind-margin, are parallel dark-brown streaks. *Hind-wing:* basal portion with ferruginous-brown striæ and marks; darker macular row, and lunular lines, as in *fore-wing*.

I at first referred the single example of this species in the collection of the British Museum to the *Neptis Ophione*, Cramer, though with considerable misgivings as to its specific identity; and a subsequent examination of Boisduval's description, and Chenu's rough figure of *Saclava* convinced me of my error, and of the specimen in question being really referable to the latter species. Mr. D'Urban has since forwarded me the wings of a specimen of this species taken in Albany Division, which precisely accord with the above description of the example from Natal. He received this specimen from J. H. Randall, Esq., D.A.C.G., Graham's Town.

Port Natal.—Coll. Brit. Mus.

Port Alfred, Kowie Mouth, Albany (D'Urban).—Coll. mihi.

"Madagascar (environs of Tanatave)."—Boisd., Faune Ent. de Mad., &c.

Genus DIADEMA.

Diadema, Boisd.

Nymphalis, Godt.

Apatura, Fab., Horsf.

IMAGO.—*Head* rather large, wide, with a tuft of hairs on forehead: *eyes* large, prominent, naked; *palpi* rather stout, elongate, divergent, projecting some distance in front of head, but little ascendant, scaly, fringed with short hairs on basal half of their inner-side; *antennæ* rather short, slender, with an abruptly-formed, ovate club.* *Thorax* moderately robust, hairy anteriorly and posteriorly: *pterygodes* remarkably narrow, finely hairy. *Fore-wings* elongate: costa considerably but gradually arched; apical portion moderately produced, rounded; hind-margin concave in centre, slightly sinuate; anal angle rounded; inner-margin moderately emarginate in its median portion; discoidal cell closed by very slender nervules. *Hind-wings* large, rounded, somewhat truncate: costa strongly arched near base, more slightly thence to apex; hind-margin but little convex, moderately sinuate; anal angle rather marked and somewhat prominent; inner-margins strongly convex for $\frac{2}{3}$ of their length, forming a deep groove which completely receives abdomen; discoidal cell closed by very slender nervule. *Legs* rather stout, of moderate length. *Abdomen* moderately long and stout.

LARVA.—Elongate, tapering towards the head, but *not towards anal extremity*;—armed with stout, rigid branched spines; *head* with two elongate spines springing upwards from its superior edge.

PUPA.—Thick, *much constricted* at junction of thorax and abdomen: *head* very bluntly bifid, anterior portion generally having a truncate appearance; on back of thorax a large *projection*, slightly curving posteriorly; along back of abdomen *two rows of short, acute, tubercular processes*, and a row of similar smaller processes along each side.

These characters of the Larva and Pupa are descriptive of the figures of the early states of *D. Auge*, Cram., in Plate V of Horsfield and Moore's Catalogue of Indian Lepidoptera.

Three species of *Diadema* are known as natives of South Africa, viz.: *D. Salmacis*, Drury, *D. Anthedon* (Boisd., MS.) Doubl., and *D. Bolina*, Linn. The first of these is given on

* In *D. Anthedon*, Doubl., the club is more elongate and gradually formed.

the authority of Boisduval, who notices it as among the collection made by M. Delegorgue at Natal; a specimen of the second species, from South Africa, is in the British Museum; the third is common in many parts of the world, and is by no means rare in this Colony. All are handsome insects, and above the middle size,—never expanding less than $2\frac{1}{2}$ inches; and the largest, *D. Salmacis*, sometimes spreading more than $4\frac{1}{4}$ inches across the wings. The ♂ insects are marked with iridescent, violet-shot markings on a black ground; the females are either duller in colour, or strikingly different. *D. Bolina* ♀ is a remarkable instance of the latter peculiarity, being coloured and marked with reddish ochreous, and white-spotted black margins, and so closely resembling *Danaïs Chrysippus*, Linn., that at first sight it might easily be taken for that Butterfly.

89. Diadema Salmacis.

Papilio Salmacis, *Drury, Ill. Nat. Hist.*, II, pl. 8, f. 1, 2.

„ „ *Fab., Ent. Syst.*, III, 1, p. 132, n. 408.

Papilio Salmasis, *Herbst, Bek. Ins.—Schmett.*, VII, pl. 166, [f. 5, 6.

Papilio Omphale, *Stoll, Suppl. Cram. Pap. Exot.*, pl. 26, [f. 1, 1a.

Nymphalis Salmacis, *Godt., Enc. Meth.*, IX, p. 397, n. 159.

Diadema Salmacis, *Boisd., App. Voy. de Deleg.*, p. 592.

„ „ *Doubl., Westw., Hewits., Gen. Diurn.* [Lep., pl. 39, f. 1.

„ „ *Chenu, Enc. d'Hist. Nat.—Pap.*, f. 253.

Expands 3 in. 7 lin.—4 in. 4 lin.

♂. *Dark-brown, inclining to black; with white, broadly violet-bordered bands.* Fore-wing: glossed with pale-bluish from base; on costa, about middle, commences a moderately broad, white, violet-bordered stripe, irregularly dentate *internally*, extending obliquely in the direction of anal angle, but on second median nervule rather abruptly widening into a broad blue-violet space, occupying outer half of inner-marginal portion, but not extending to hind-margin; on the *external* edge of this violet space is a row of five or six white spots; close to costa, near apex, two oval white spots commence a row parallel to hind-margin, usually interrupted just above wide violet space, but continued to submedian nervure by two or three white spots *in* the violet; fringe conspicuously spotted with white. Hind-wing: from inner-margin, a little before middle, a transverse, white band extending to subcostal nervure—bordered *internally* narrowly, *outwardly* very broadly, with violet blue; this latter colour radiating to

a row of white spots near and parallel to hind-margin, arranged *in pairs* on each nervule; fringe conspicuously marked with white in hollows of sinuate margin. **UNDER-SIDE.**—*Olivaceous-brown, rather glistening*; with white bands and spots. *Fore-wing*: white band, from about middle of costa, extending to just above anal angle; white spots near apex distinct; spots that on *upper-side* edge the violet space, near hind-margin, larger than above; before white band, the ground-colour is darker; a few small, white spots near base. *Hind-wing*: white, transverse band continued narrowly to apex; each spot in the row running parallel to hind-margin divided into two parts.

♀. Similarly marked; white bands much *broader* and more conspicuous, and only *narrowly* bordered with *greyish-blue*. **UNDER-SIDE.**—Quite similar to that of ♂.

This splendid species of *Diadema* has long been known as an inhabitant of Tropical West Africa. It was first discovered as a native of extra-tropical Southern Africa by the French traveller Delegorgue, as noted in the Appendix to his work, "Voyage dans L'Afrique Australe," by M. Boissudval.

West Africa. Sierra Leone. Ashanti.—Coll. Brit. Mus.
"Port Natal."—Boisd., App. Voy. de Deleg.

90. *Diadema Anthedon*.

Diadema Anthedon, (Boisd., MS.), Doubl., Westw.,
[Hewits., Gen. Diurn. Lep., pl. 37, f. 2.

Expands 3 in. 3 lin.—3 in. 5 lin.

♂. *Black*; with large patches of iridescent white. *Fore-wing*: an elongate, more or less distinct, longitudinal white streak in discoidal cell; a broad, oblique, white stripe, beyond middle, from costa, crossed by three nervules, almost entirely separates apical portion from rest of wing; a large, somewhat semi-circular, white blotch occupies nearly the whole of inner-margin, rising as far as median nervule. *Hind-wing*: iridescent white; basal portion blackish; a broad, black band along hind-margin, radiating in streaks *between* nervules. **UNDER-SIDE.**—*Paler*;—similar in pattern. *Fore-wing*: a small white spot at base; another on costa, near base; a third in discoidal cell, *before* the white streak; costa tinged with ochreous-brown, as well as apical portion beyond oblique white band. *Hind-wing*: hind-marginal band coloured with ochreous-brown, much *narrower* than on *upper-side*, radiating very distinctly between nervules. On *both wings* are the traces of a double row of minute, whitish lunules, along hind-margin.

In some West African specimens, the iridescent light forms a bluish bordering to the white markings; and the hind-

marginal band on hind-wing is very broad and of a brownish hue.

The ♀ of this fine species is at present unknown. It is not unlikely that, as in *D. Bolina*, the sex in question may be reddish brown in tint. The only South African specimen of *D. Anthedon*, that I know of, is that in the British Museum.*

D'Urban, Natal (R. C. Jones).—Coll. mihi.

Port Natal. Sierra Leone. Ashanti,—Coll. Brit. Mus.

91. *Diadema Bolina*.

♂. *Papilio Bolina*, Linn., *Syst. Nat.*, II, p. 781, n. 188.

„ „ „ *Mus. Lud. Ulr. Reg.*, p. 295, n. 113.

„ „ *Drury, Illus. Nat. Hist.*, I, pl. 14, f. 1, 2.

„ „ *Fab., Syst. Ent.*, p. 507, n. 269.

„ „ *Cram., Pap. Exot.*, pl. 65, f. E, F.

„ „ *Herbst, Bek. Ins.—Schmett.*, IX, pl. 244,
[f. 3, 4.

„ „ *Fab., Ent. Syst.*, III, 1, p. 126, n. 384.

Nymphalis Bolina, Godt., *Enc. Meth.*, IX, p. 396, n. 157.

♀. *Papilio Misippus*, Linn., *Syst. Nat.*, II, p. 767, n. 158.

„ „ „ *Mus. Lud. Ulr. Reg.*, p. 264,
[n. 83.

„ „ *Fab., Syst. Ent.*, p. 481, n. 171.

„ „ *Fab., Ent. Syst.*, III, 1, p. 50, n. 154.

Danaïs Misippus, Godt., *Enc. Meth.*, IX, p. 394, n. 153.

Papilio Diocippus, *Cram., Pap. Exot.*, pl. 28, f. B, C.

„ „ *Herbst, Bek. Ins.—Schmett.*, VII,
[pl. 155, f. 3, 4.

Var. ♀.—*Papilio Inaria*, *Cram., Pap. Exot.*, pl. 214,
[f. A, B.

„ „ *Herbst, Bek. Ins.—Schmett.*,
[VII, pl. 157, f. 5, 6.

Diadema Bolina, Boisd., *Faune Ent. de Mad.*, §c., p. 39.

„ „ „ *App. Voy. de Deleg.*, p. 592.

Expands 2 in. 7 lin.—3 in. 7 lin.

♂. *Black*; with *white, violet-shot, large spots*. *Fore-wing*: just beyond extremity of discoidal cell, a transverse, rather large, elongate, sub-ovate, obliquely-lying, white marking, shot with blue-violet (forming in certain lights a lustrous circle on the black ground-colour around the white), crossed by four nervules, and extending from near costa, to below second median nervule; a similar, much smaller spot,

* Mr. R. C. Jones has since forwarded me a fine specimen from Natal, which presents the same bluish border round the white markings as is noticeable in certain West African specimens.

crossed by two nervules, close to apex. *Hind-wing*: a large, central, circular, white marking, violet-ringed like those in *fore-wing*; two or three small, indistinct, thin, bluish lunules, close to anal angle. *Fringes* of both wings *very short*, black, varied with white in indentations of margin. **UNDER-SIDE.**

—*Fore-wing*: large white markings as on *upper-side*, but *not* violet-ringed; costa thinly dusted with white as far as larger white marking; three small, white spots immediately below subcostal nervure; a space of rich *chocolate-red*, from base, occupies nearly whole of cell, extending a little below it; apical portion shining brownish-ochreous; white spot at apex commencing a row of white dots, parallel to hind-margin,—only a few of which are apparent; two parallel rows of conspicuous white lunules along hind-margin, which is black; immediately before larger white marking, and sometimes touching it, is a small, narrow, irregularly-shaped, white mark, on costa. *Hind-wing*: shining brownish-ochreous; tinged with chocolate red near anal angle, and on costa near base; large central spot extended into a very broad, white, median band, from costa to inner-margin, edged with black *inwardly* from costal nervure, and containing an elongate, black spot, close to costa a little beyond middle, and a black streak on inner-margin before anal angle; hind-marginal black broader than in *fore-wing*, its two rows of white lunules larger and more conspicuous; parallel to hind-margin, a row of rather distinct white dots.

♀. *Dull reddish-ochreous*. *Fore-wing*: apical half of wing blackish, narrowing to a very thin bordering at base and anal angle, containing an oblique, pure-white stripe from costa, consisting of four moderate-sized spots (of which the lowest is separate from the rest) and almost reaching hind-margin; two rows of whitish lunules border hind-margin, as on under-side of ♂, but not so distinct; close to apex, a narrow, white stripe, composed of three small spots, almost parallel to the larger stripe, with a white dot a little *below* it. *Hind-wing*: a dusky-blackish spot on costa, a little beyond middle, as in ♂, but much *broad*er; a rather narrow, blackish border to hind-margin, containing a row of more or less distinct, whitish lunules, and the indications of a similar row before the outer one; faint-bluish tinge at anal angle as in ♂. **UNDERSIDE.**—Considerably like that of ♂, particularly the *fore-wing*. *Fore-wing*: white stripes as on *upper-side*; white spots below subcostal nervure as in ♂; dull-red from base much *paler* than in ♂, tinged with ochreous, and occupying whole of inner-margin (where it is very pale), only leaving a narrow band of blackish, from base to anal angle, before larger white stripe;

apical portion, beyond larger stripe, shining yellow-ochreous ; hind-marginal lunules as in ♂. *Hind-wing*: shining yellowish-ochreous ; a whitish central shade indicates position of white transverse band ; blackish costal spot as on *upper-side* ; a blackish mark at base, on costal nervure ; and another, rounder, blackish mark at extremity of discoidal cell, on discoidal nervule ; hind-marginal border as in ♂, as well as row of white dots parallel to it.

Var. ♀ (*D. Inaria*, Cram.)—*A suffusion of the reddish-ground-colour covers apex*, only leaving costa and hind-margin blackish ; *the white stripes being also almost obliterated with the same hue*.

LARVA.—“ Resembling, at first sight, that of *D. Chrysippus*, especially in colour and marking ; but the spinous elongate organs are stiffer, less mobile, and eight in number. Gregarious on *Nerium*.”

PUPA.—“ Less cylindrical (than that of *Chrysippus*), slightly constricted, *green*, without gilded spots or black ring.”—Boisd., *Faune Ent. de Mad.*, p. 40.

Marshes, gardens, and open ground.

February (m)—March (m).

Uncommon at Knysna and Plettenberg Bay, early in the year 1859. The few specimens I took were all females, but both sexes are, I am informed, common there in some years. The flight of those I noticed resembled that of a *Danaïs*, but was swifter. Knysna is the most Southern locality recorded for this handsome Butterfly, which is a very widely-spread and common species throughout Africa and Asia. It is singular, also, that the insect has likewise been captured in the New World, whither it has probably been conveyed with some plants. As will be seen from the synonyms given, so strikingly different are the two sexes that, until a comparatively recent period, they were ranked as not only different species, but even as belonging to different *Genera*, by entomological authors. Boisduval stated their identity in 1833, asserting that the fact was proved by their having been reared from the same Larvæ. But if any one needs proof, after a comparison of *Bolina* and *Misippus* together, the fact of a *hermaphrodite* specimen being in the collection at the East India House ought to set his doubts at rest. In connection with the strong resemblance of the ♀ *Bolina* to *Danaïs Chrysippus*, Linn., it is curious that, according to Boisduval, the Larva of the former species is very similar to that of the latter ; and the Pupæ of the two not very unlike ; both obtaining their food in the larval condition from the leaves of the Olcander. It is likewise worthy of remark that both *Danaïs Chrysippus* and the ♀ of *Bolina* are subject to a similar suffusion of ochreous colouring, whereby the apical black and white are almost obliterated.

Knysna. Plettenberg Bay. Natal.—Coll. mihi.

King William's Town.—Coll. W. S. M. D'Urban.*

Damaraland.—Coll. C. J. Andersson.

Port Natal. Sierra Leone. Ashanti. India. Java. Jamaica.—Coll. Brit. Mus.

* “ Always rare : not seen in 1860—61.”—D'Urban, in litt.

Java. North India. Canara. Borneo.—Coll. E. I. C. Mus.
 “Madagascar. Bourbon. Mauritius. Bengal. China.
 Sunda Isles. Guiana.”—Boisd., Faune Ent. de Mad.
 “Port Natal (universal).”—Boisd., App. Voy. de Deleg.
 “Somauli Country.”—Felder, Lep. Fragm., p. 16.
 “Cayenne. Surinam. Guiana. East Africa. New
 Holland (!).”—Gen. Diurn. Lep.

Genus EURYPHENE.

Euryphene, Boisd.

IMAGO.—*Head* wide; *palpi* long, erect; *antennæ* very long, with a gradually-formed, robust club. *Thorax* robust and woolly. *Fore-wings* moderately large; costa very much arched; apex rather acute; hind-margin nearly straight. *Hind-wings* sub-oval; hind-margin entire, or not strongly scalloped. *Abdomen* rather small.

The above characters of the Genus *Euryphene* are taken from the “Genera of Diurnal Lepidoptera.” The few species known inhabit the West Coast of Africa, with the exception of *E. cærulea*, Boisd., discovered at Natal by M. Delegorgue.

92. *Euryphene cærulea*.

Euryphene cærulea, Boisd., App. Voy. de Deleg., p. 592,
 [n. 77.]

“Habit and size of *Guineensis*. Deep-blue; as in *Veronica*, Cram.;* near hind-margin of *both* wings a row of oval spots rather darker than ground-colour, succeeded by a marginal streak of the same hue. Basal portion of wings, as far as middle, of a darker hue than ground-colour; and on this darker portion, in *fore-wing*, are two or three annular spots of paler blue, situated transversely between costa and median nervure. UNDER-SIDE.—Brownish-red, as in *Veronica*, with some paler transverse striæ; beyond middle, as in *Veronica*, a transverse series of small white dots.

Port Natal.”—Boisd., App. Voy. de Deleg.

Genus ATERICA.

Aterica, Boisd.

Hamanumida, Hübn.

Nymphalis, Godt.

Adolias, Boisd.

IMAGO.—*Head* large, nearly as wide as thorax; *eyes* smooth, prominent; *palpi* small, scaly, ascendant, projecting

* Pap. Exot., pl. 323, f. F. C.

but little beyond forehead; *antennæ* long, slender, ending in a very gradually-formed, elongate club. *Thorax* oval, moderately robust, clothed with short down. *Fore-wings* slightly produced at apex; costa tolerably arched; apex not acute, but lightly rounded; hind-margin almost straight (if anything, slightly concave), very slightly sinuated; inner-margin almost straight. *Hind-wings* large and broad; costa strongly arched, especially near base; hind-margin very slightly scalloped; anal-angular portion rather produced; inner-margins meeting beneath abdomen; and forming a deep groove. (Discoidal cell closed in *both* wings.) *Legs* stout, rather long. *Abdomen* short, half the length of inner-margin of hind-wing, slender.

Of this limited African Genus, a single species, *A. Meleagris*, Drury, is recorded by Boisduval as being found in that portion of the continent which lies South of the Tropic. Having been met with in Damaraland, this Butterfly would seem to be widely distributed in Africa, as it has long been known as a native of Sierra Leone and the regions in that vicinity. Its colouring strongly resembles that of the *guinea-fowl*, consisting of white, black-edged spots, sprinkled thickly over a dull-grey surface. It is probably a sylvan insect, and should be looked for at Natal.

93. *Aterica Meleagris*.

Papilio Meleagris, Drury, *Ill. Nat. Hist.*, III, pl. 27, f. 3, 4.

„ „ *Cram.*, *Pap. Exot.*, pl. 66, f. A, B.

„ „ *Herbst.*, *Bek. Ins.*—*Schmett.*, VI, pl. 145,
[f. 1, 2.

„ „ *Fab.*, *Ent. Syst.*, III, 1, p. 128, n. 393.

Hamanumida Meleagris, Hübn., *Verz. Bek. Schmett.*, p. 18,
[n. 104.

Nymphalis Meleagris, Godt., *Enc. Meth.*, IX.

Aterica Meleagris, E. Doubl., *List. Lep. Brit. Mus.*

„ „ *Chenu*, *Enc. d'Hist. Nat.*, p. 140, f. 257.

Adolias Meleagris, Boisd., *App. Voy. de Deleg.*, p. 592.

Var? *Papilio Melantha*, Fab., *Ent. Syst.*, III, 1, p. 128,
[n. 394.

Nymphalis Melantha, Godt., *Enc. Meth.*, IX, p. 388,
[n. 132.

Expands 2 in. 2 lin.—2 in. 7 lin.

Soft brownish-grey; with transverse rows of white, black-edged spots. Fore-wing: in discoidal cell, two irregular, zig-zac, transverse, black lines, each more or less conspicuously bordered with white, and enclosing a white dot at their commencement; closing cell is a similar streak, but annular, and

shaped like the figure 8; beyond cell three transverse rows of white spots commence on costa,—first row considerably sinuate, from costa beyond middle to inner-margin a little before middle, consisting of seven or eight spots (only black-edged on their *inner* side),—second row straighter, consisting of eight spots *ringed* with black, but not extending below submedian nervure,—third row close and parallel to hind-margin, small, lunular, only black edged on their *inner* side (the first spot, in ♂, enlarged so as to form a *small white tip* to wing, at apex); fringe narrow, lightly varied with white. *Hind-wing*: three transverse rows of spots in *fore-wing* continued across this wing, the innermost and middle rows only as far as third median nervule, the outer row to anal angle; a thin black ring in discoidal cell, another closing cell, and a third, indistinct one touching the latter ring *superiorly*; fringe spotted with white. UNDER-SIDE.—*Rich-ochreous, tinged with brown*, deeper towards hind-margins: spots mostly rather larger than on *upper-side*, but not so sharply defined; second transverse row of spots grey-margined on their *outer* edge, making them appear ocellated; spots in outer row united to hind-marginal edge by short dark-grey streaks. *Fore-wing*: a greyish space at anal angle; annular streak at extremity of discoidal cell enclosing a whitish space. *Hind-wing*: first and second rows of spots both extending to submedian nervure by an additional spot; black rings in cell enclosing white spots.

In some specimens, the ground colour of underside is more obscured than described above, and the white spots are indistinct.

Sierra Leone. Ashanti.—Coll. Brit. Mus.

Damaraland.—Coll. S. A. Mus. (H. Hutchinson); et Coll. C. J. Andersson.

“Moselekatze’s Country.”—Boisd., App. Voy. de Deleg.

Genus HARMA.

Harma, *E. Doubl.*

Cymothoë and Apatura, *Hübner*.

Nymphalis, *Godt.*

Eupithes and Adolias, *E. Doubl.*

IMAGO.—*Head* rather broad, with a tuft of ‘short hairs on forehead; *eyes* large, prominent, smooth; *palpi* small, short, scaly, ascendant, almost parallel, projecting moderately in front of head; *antennæ* long, slender, with an elongate, gradually-formed, sub-cylindrical club. *Thorax* tolerably robust, clothed with short downy hair. *Fore-wings* rather elongate, the apical portion being somewhat produced; costa

moderately arched from base to apex ; hind-margin slightly excavate about middle, but convex a little above anal angle, slightly sinuate ; anal angle rounded ; inner-margin almost straight ; discoidal cell *closed*. *Hind-wings* rather large : costa strongly convex at base, but thence nearly straight ; hind-margin moderately scalloped, anal-angular portion considerably produced, but rounded at extremity ; inner-margins forming a very complete channel for abdomen, and contiguous throughout their extent. *Legs* rather short and stout. *Abdomen* short, rather slender.

Of this Genus, two species are known as natives of South Africa. They are insects rather below the middle size, and rather peculiar than handsome in colouring and marking. *H. Alcimedea*, Godt., Sp., the larger of the two, is marked with white bands and spots on a blackish ground ; while *H. Eupithes*, Doubl., is of a curious, pale greenish-ochreous tint, with brownish markings. Both Butterflies frequent woods.

94. *Harma Alcimedea*.

Nymphalis Alcimedea, Godt., *Enc. Meth.*, IX, p. 384, n. 112.

Adolias Alcimedea, E. Doubl., *List. Lep. Brit. Mus.*, p. 102.

Expands 2 in. 4 lin.—2 in. 5 lin.

Brownish-black, spotted and transversely striped with white.

Fore-wing : in discoidal cell, beyond its middle, a moderately-wide, transverse, white bar, angulated *externally* ; beyond cell, and beyond middle, a short, macular, white stripe from costa, joining, on first median nervule, a broad white stripe (deeply scalloped along its outer edge), which, commencing very narrowly and indistinctly on costa not far from apex, abruptly widens on first median nervule, and thence extends to inner-margin beyond middle ; beyond band, nearly parallel to hind-margin, a row of six white, small, oval spots, the third, fourth, and fifth of which are situate *in hollows of indentations of white band* ; beyond these, a parallel row of somewhat triangular, sublunular marks, slightly darker than ground-colour, and edged *outwardly* with lighter streaks. *Hind-wing* : broad, white band of *fore-wing* continued across this wing to submedian nervure, narrow at costa, gradually widening, and less deeply scalloped *externally* than in *fore-wing* ; row of white dots and dark markings likewise continued, the pale streaks outwardly bordering the latter more distinct than in *fore-wing* ; orange-ochreous dots along hind-margin, one at extremity of each nervule, the largest on third median nervule. *Fringes* very narrow, chequered with white. *UNDER-SIDE*.—*Pale brownish-grey, mingled with*

ferruginous; white markings as on *upper-side*. *Fore-wing*: two zic-zac, transverse, ferruginous striæ in cell (the outer one *inwardly edging* white bar), meeting below median nervure; at extremity of cell, two russet striæ, enclosing a paler space; commencement of broad, white band on costa a little more apparent than on *upper-side*, but still very indistinct; white spots very ill-defined; dark marks *wanting*, but streaks edging them whiter than on *upper-side*. *Hind-wing*: an annulated, 8-like, ferruginous mark in cell, which is closed (as in *fore-wing*) by ferruginous striæ including a narrow, paler space; a zic-zac ferruginous streak, from costa beyond middle, edges the *inner* side of an irregular, white marking, immediately before commencement of white band, and is interruptedly continued to submedian nervure; two rows of whitish spots ill-defined; orange-ochreous hind-marginal dots not so conspicuous as on *upper-side*, more *ferruginous*.

Woods.

At Knysna, on 1st December, 1858, I saw a solitary specimen of this species, or one very closely-allied, in a small wood near the village. It floated rapidly over a small open spot, and settled with expanded wings on a young tree, just out of reach of my net, and provokingly sat still for about two minutes,—so that I could observe, as the sunlight shone through the white markings of its wings, that the pattern of its markings differed from that of *Eurytela Hiarbas*, Drury—a Butterfly that is somewhat similar in appearance. At last I made a jump at the insect, but it escaped and darted away, much to my disappointment. Two specimens, taken by a resident at Knysna a few years ago, are in my collection; and a third has been recently sent me from the same locality, with the following note of its capture: “Found settled on the ground, in *sheep-kraal*, April 27th, 1860.” So that this insect, as many other species of *Nymphalidæ* are known to do, would seem to visit the excrement of animals for the purpose of imbibing its moisture. A single specimen, in the British Museum, was brought from South Africa by Dr. A. Smith.

Knysna.—Coll. mihi.

South Africa.—Coll. Brit. Mus.

95. *Harma Eupithes*.

Adolias Neocles, *Boisd.*, *MS.*

Harma Eupithes (Pallene *Eupithes*, *E. Doubl.*, *MS.*), *Doubl.*

[*Westw.*, *Hewits.*, *Gen. Diurn. Lep.*, pl. 41, f. 1.

Expands 1 in. 9 lin.—1 in. 11 lin.

Pale-ochreous, with a *greenish tinge*; with *dark-brown marginal lunules*. *Fore-wing*: base suffused with greyish; in discoidal cell, about its middle, a small, irregular, dark-brown ring, *open* on median nervure, beneath which its *outer* edge indistinctly descends; a large, somewhat quadrate, dark-brownish marking, commencing within cell, extends considerably beyond it, but leaves a conspicuous, narrow streak

of ground-colour closing extremity of cell,—the lower edge of this quadrate marking extends irregularly a little below median nervure and first median nervule; apex and hind-margin narrowly bordered with dark-brownish; before which, running parallel to hind-margin, are two rows of dark-brown lunules, those of the *inner row* thinner and acuter than those of the outer (except the three next inner-margin, which are thick and somewhat suffused),—while, in the outer row, the two *central lunules* are conspicuously larger and thick. *Hind-wing*: base dusky-greyish, which colour narrowly extends to anal angle above submedian nervure; hind-marginal border as in fore-wing, but (as in *Alcimedea*) with orange-ochreous dots at extremities of nervules; two rows of lunules *darker* and more sharply defined than in *fore-wing*. UNDER-SIDE.—*Dull orange-ochreous*, varied with brownish striæ; a *thin, straight, brown streak* from costa of fore-wing beyond middle to anal angle of hind-wing. *Fore-wing*: markings in discoidal cell as on *upper-side*, but *much paler*; a small brown ring immediately below median nervure, near insertion of first median nervule; rows of lunules very indistinct. *Hind-wing*: in cell, a thin, brownish, 8-like ring; at its extremity, a very thin, double line closing it; indistinct traces of a transverse stria like that in *Alcimedea*; lunular rows slightly more apparent than in *fore-wing*.

This curious little species of *Harma* is also an inhabitant of the Knysna woods, but would seem to be exceedingly rare. I never noticed it during my eight months' residence there; and the single specimen I possess, I was told by the capturer thereof (who kindly presented it to me), was the only individual ever taken or noticed during a period of many years. Three specimens of *H. Eupithes* in the collection of the British Museum were presented by Dr. A. Smith, but their particular locality of capture is unknown to me. The species should be looked for in the forests of this Colony and Natal, as it is rare in collections. Its small size and inconspicuous colouring have doubtless been the cause of its escaping the notice of collectors; particularly if, as is most probably the case, it has the *Nymphalidean* habit of settling on lofty trees. It would not be easily observed, either, when settled on the boles of trees, or on the ground, owing to its dull-ochreous, brownish-streaked under-surface.

Knysna.—Coll. mihi.

South Africa.—Coll. Brit. Mus.

Genus MENERIS.

Meneris (*Boisd. MS.*), *E. Doubl.*

Tisiphone, Hübn.

Nymphalis, Godt.

IMAGO—*Head* rather small, hairy; *eyes* large, clothed with short hair; *palpi* of moderate length, densely hairy beneath,

gradually tapering, acutely pointed, ascendant almost perpendicularly in front of head, convergent; *antennæ* long, rather stout, with an elongate, gradually-formed, cylindrical club, curving outwardly. *Thorax* robust, ovate, elongate, clothed with hair (which is thick and long on the sides and posteriorly). *Fore-wings* large, somewhat truncate: costa but moderately arched, the convexity commencing very gradually from base; apex rounded; hind-margin almost straight, moderately sinuate; anal angle rounded; inner-margin almost straight, hairy near base; discoidal cell closed, short, truncate, widest near its extremity. *Hind-wings* large, ovate: costa remarkably straight after the first short convexity of base, only slightly arched a little beyond middle; hind-margin scalloped; anal angle rather marked; inner-margins meeting to a little beyond tip of abdomen, forming a deep groove; discoidal cell closed, broad, very short; a dense clothing of long hairs, commencing in cell, increases in length towards inner-margin. *Legs* of moderate length, stout, with short, bristly hairs. *Abdomen* short, moderately stout; in ♂ rather slender.

This Genus has been founded on a single species, *M. Tulbaghia*, Linn., hitherto only known as a native of Southern Africa. Its large size and warm and harmonious colouring render it one of the finest species found in the country. It is a mountain-haunting insect, only occasionally descending to level country. The position of this Genus among the *Nymphalidæ* is at present somewhat uncertain, owing to our entire ignorance of the Larva. There is a singularly *Satyriform* aspect in the Imago, which the large ocelli in the *hind-wing* tend to increase; while its habits of frequenting dry and rocky ground, and settling on large stones or on the earth, are akin to those of the "Brown Butterflies" or *Satyridæ*.

96. *Meneris Tulbaghia*.

Papilio Tulbaghia, Linn., *Syst. Nat.*, II, p. 775, n. 158.

" " *Mus. Lud. Ulr. Reg.*, p. 284, n. 102.

" " *Fab.*, *Syst. Ent.*, p. 499, n. 241.

" " *Cram.*, *Pap. Exot.*, pl. 3, f. E, F.

" " *Fab.*, *Ent. Syst.*, III, 1, p. 105, n. 323.

Papilio Tulbachius, *Herbst, Nat. Bek. Ins.*—*Schmett.*, VIII,
[pl. 214, f. 5, 6.

Oreades marm. Tulbaghia, *Hübner, Samml. Exot. Schmett.*,
[Band I.

Tisiphone Tulbaghia, *Hübner, Verz. Bek. Schmett.*

Nymphalis Tulbaghia, *Godt., Enc. Meth.*, IX, p. 400, n.
[171.

Meneris Tulbaghia, *E. Doubl., List. Lep. Brit. Mus.*, p. 106.

Meneris Tulbaghia, *Doubl., Westw., Hewits, Gen. Diurn.*
 [Lep., pl. 46., f. 3.
 „ „ *Chenu, Enc. d'Hist. Nat.—Pap., pl.*
 [40, f. 2.

Expands 3 in. 2 lin.—4 in. 1 lin.

Rich dark-brown, with deep yellow-ochreous transverse stripes and spots: hind-wing with blue ocellated spots.

♂. *Fore-wing*: suffused with chocolate-brown from base; beyond middle, a short, transverse, deep yellow-ochreous band, from costa to between second discoidal and first median nervules, divided unequally into four by three crossing nervules; a little before this band, commencing immediately beneath extremity of discoidal cell, a similar, longer, transverse band of the same colour, also crossed by three nervules, and extending to inner-margin beyond middle; beyond bands, near and parallel to hind-margin, a row of eight yellow-ochreous spots,—the first three of which are contiguous and somewhat quadrate,—the fourth sub-ovate and inclining out from the line towards hind-margin,—the remaining four rounded, the last of them (between third median nervule and submedian nervure) being the smallest; along hind-margin, a moderately-wide border, slightly paler than ground-colour, and containing a thin, dark, median streak from apex, nearly to anal angle. *Hind-wing*: ochreous band of *fore-wing* (that extends to inner-margin), continued across this wing by a slightly-paler band from costa, narrowing to a little before anal angle, but not quite reaching inner-margin; space *before* band almost wholly chocolate-brown, with a coating of hairs of that colour, which are longest on submedian nervure; beyond band, a transverse row of five ocellated spots, of different sizes, black, in thin, yellow-ochreous rings, with glistening violet-blue centres pupilled with white, extending from second subcostal nervule to anal angle; of these ocelli, the second is sometimes wanting, and always small when present,—the fifth, at anal angle, being always *bipupillate*, with scarcely a tinge of the blue central colouring, but in a *complete* yellow-ochreous ring. *Fringe* of both wings *pale creamy-yellow*; brown-chequered in *fore-wing*, only partly so in *hind-wing*. *UNDER-SIDE*.—*Paler and duller* in colouring, but the surface *more glossy and smooth*; yellow-ochreous markings much paler, especially in *hind-wing*. *Fore-wing*: in and beyond middle of discoidal cell, a broad, transverse, short, pale-yellowish bar, rather widely black-margined both internally and externally; basal portion, and hind-margin from apex, *paler* than rest of ground-colour, the latter including two thin, parallel, dark streaks from apex, becoming

obsolete a little above anal angle. *Hind-wing*: of the same hue as base and apex of *fore-wing*; two irregularly-ziczac, black, transverse striæ before middle, from costa to submedian nervure or a little below it; on costa, *between* the two striæ, a more or less distinct, very pale, yellowish spot, occasionally obsolete or nearly so; discoidal cell closed by a short, black streak; pale transverse band edged *internally* with a sharply-defined, black streak; ocellated spots very different from those on *upper-side*, more equal in size, (the second spot *wanting*, but a large additional ocellated spot between first and second subcostal nervules), their violet, white-pupilled centre very small, surrounded by dull-golden, black, and pale-yellow rings in a more or less defined, black outer circle; of these ocelli, the first three are similar, the fourth has a large black centre edged with violet on its *inner* rim, the fifth has a black, bipupillate centre *without* violet, and its rings are half-obliterated *outwardly*; immediately beyond the *fourth* ocellus is an oblong space of glistening-violet scales; from apex, two parallel, blackish streaks extend along hind-margin, the *inner* one ending in the patch of violet scales just described, the *outer* one reaching anal angle. *Fringe* of wings paler than on *upper-side*.

♀. *Slightly duller and paler in colouring, with broader markings*; the blue in ocelli of hind-wing *purer* than in ♂, with scarcely any violet reflection. *Fore-wing*: in discoidal cell, near its extremity, a yellow-ochreous bar, similar in size and shape to that on *under-side* of ♂ (this marking is sometimes half obliterated). *Hind-wing*: second ocellus always *wanting*, but in some specimens the traces of an additional ocellus, between first and second subcostal nervules, are visible. UNDER-SIDE.—Like that of ♂; but the markings generally *broadier and paler*.

Local. Sides of mountains and lofty hills: rarely in low-lying localities. February (b)—April (c).

"In numbers on the high ridge of hills between Graham's Town and Howison's Poort, in April."—D'Urban, in litt.

If the collector will ascend Table Mountain, or Devil's Mount, as far as the steep slopes at the base of the precipitous summit-range of grey strata, during the months mentioned above, he can scarcely fail to meet *Tulbaghia*, though I cannot undertake to promise that closer acquaintance with the species which every collector of insects counts on obtaining. The Butterfly is swift and uncertain in its flight, sometimes sailing about for a considerable period without settling; and though on a fair field I should think it quite possible to run the insect down, yet, on an incline of about 40°, irregularly clothed with coarse grass and stunted, tough (and often prickly) shrubs, and sprinkled, by no means sparingly, with small and large pieces of sandstone, many of which attain the size of boulders,—where walking itself is attended with difficulty—it can readily be imagined that

Tulbaghia's chances of eluding the entomologist's advances are numerous. In April, when the lovely Lily, *Nerine Sarniensis*, crimson sprinkled with gold-dust, brightens the steep mountain-slopes, one has the best chance of capturing the *Meneris*, as it is fond of settling on these flowers now and then; as well as on a deep-red species of *Antholyza*, that blossoms about the same period. On rocks, also, the species occasionally rests; and, at Knysna and Plettenberg Bay (where this insect, though not common, attains a larger size and richer colouring than near Cape Town), I found that it frequented the steep, sandy banks of roads cut through the summits of the hills. In these latter haunts it would sit unnoticed till one passed by, when it would suddenly dart out, and fly over the bank and down the hill in an unpleasantly *brusque* manner. A gentleman resident at the Knysna, whose duties carry him over a considerable extent of country almost daily, was the first to bring to my notice this peculiar habit of *Tulbaghia*, and the finest specimen in my collection is one of his captures. The Larva of this species remains wholly unknown, and I have repeatedly sought in vain for both it and the Pupa in the localities frequented by the perfect insect. The former doubtless feeds on some alpine plant, to the stems of which, or the sides of rocks, the chrysalis is most probably attached. (Linné named the species in honour of Ryk van Tulbagh, Governor of the Cape Colony under the Dutch (from 1751 to 1771 A.D.), who must have made good use of his one eye, if he collected all the insects of the Cape that he sent home to Europe. It is a pity, for the sake of entomological science, that the good example of old Ryk has not been more extensively followed by his successors in the gubernatorial office, not to mention the other inhabitants of the Colony.)

Cape Town. Knysna.—Coll. mihi.

Graham's Town.—Coll. W. S. M. D'Urban.*

Cape Town.—Coll. S. A. Mus.

South Africa.—Coll. Brit. Mus.

Genus NYMPHALIS.

Nymphalis, Latr.

Charaxes, Ochsenh.

Eriboea, Hübn.

IMAGO.—*Head* of moderate size, clothed with close, thick, velvety-down: *eyes* large, smooth, very prominent; *palpi* thick, compact, ascendant, convergent at tips, rising considerably above forehead, acute, scaly; *antennæ* rather short, thick, straight, with a very gradually-formed, cylindrical club. *Thorax* very robust and elongate, especially in ♂, clothed with short velvety down, hairy posteriorly. *Wings* thick and rigid, supported by very strong nervures. *Fore-wings* rather broad, the apical portion more or less produced, in some species angulating hind-margin; costa gradually and moderately arched from base; apex very slightly rounded; hind-margin more or less emarginate in middle, but prominent near and at anal angle, very lightly sinuate; inner-margin

* "Taken near Port Elizabeth, by Mr. Rickards."—D'Urban, in litt.

almost straight; discoidal cell short, *closed*. *Hind-wings* large, somewhat truncate, or produced, in some species, more or less, at anal angle: costa strongly arched from base; apex rather marked; hind-margin rounded, moderately scalloped, tailed at extremities of first and third median nervules,—occasionally only at extremity of the *latter* nervule; anal angle rounded; inner-margins forming a deep groove to receive abdomen; discoidal cell very short, usually *closed*. *Legs* thick, of moderate length. *Abdomen* short—slender and compressed in ♂, rounded and sub-ovate in ♀.

LARVA.—*Elongate, thickened in middle like a slug; head* wide, large, and flattened anteriorly, and crowned with four spinous processes or horns; hinder part attenuated, flattened, and rather acutely *bifid*.

PUPA.—*Rounded, sub-ovate, smooth, with strongly-arched back; head* very bluntly bifid; tail with two minute tubercles.

The above characters of the Larva and Pupa of *Nymphalis* are obtained from several figures and descriptions. Eight species of the Genus are recorded from South Africa, mostly large and conspicuous insects. Most of the species have white or light-hued stripes and spots on a blackish ground, such as *N. Brutus*, Cramer, *N. Xiphares*, Cram., and *N. Pelias*, Cram.; but in *N. Zoolina*, Westwood, the reverse is the case. The *under-sides* of the wings are, in most instances, beautifully streaked and marbled with pearly- and olive-greys, varied with white-edged black spots and streaks, and bordered with violet or yellowish lunules. All, as far as is known at present, are inhabitants of woods; where they delight to settle on the stems or lofty twigs of timber-trees, frequently darting from their resting-places, and sporting about with a rapidity which might be inferred from their massive thorax, and strong, cleanly cut wings. Again and again, even when roughly scared from their seat, will they return to the same position. They do not appear to relish the honey of flowers, but the moisture that exudes from the bark of trees forms their favourite food. Occasionally, too, they are attracted to earth by some damp substance, and the more strongly-scented such substance be, the more likely are they to settle on it. The males are always the higher, more rapid, and frequent fliers; and females are consequently the oftener captured, though anything but slow in their movements. The metropolis of this typical Genus of the large group of the *Nymphalidæ* is Tropical Western Africa, but nine or ten species are known to inhabit India and the great Asiatic Islands. I have little doubt that, when the forests of Africa South of the tropic have been a little more inves-

tigated, a considerable number of the tropical species of *Nymphalis* will have to be added to our list of Rhopalocera. Only three of our eight species are known as natives of tropical Africa, and *one* of the three—*N. Pelias*, Cramer—I give as South African solely on the authority of the author who first named and figured the species.

97. *Nymphalis Xiphares*.

♀. *Papilio Xiphares*, *Cram.*, *Pap. Exot.*, pl. 377, f. A, B.
Papilio Xyphares, *Herbst*, *Nat. Bek. Ins.*—*Schmett.*, IV,
 [pl. 60, f. 5, 6.

Papilio Xiphares, *Fab. Ent. Syst.*, III, 1, p. 71, n. 221.

Nymphalis Xiphares, *Godt.*, *Enc. Meth.*, IX, p. 357, n. 25.

Charaxes Xiphares, *Boisd.*, *App. Voy. de Deleg.*, p. 593.

♂. *Papilio Thyestes*, *Stoll*, *Suppl. Cram. Pap. Exot.*, pl.
 [32, f. 2, 2 B.

Eribœa Thyestessa, *Hübner*, *Verz. Bek. Schmett.*, p. 432.

Nymphalis Thurius, *Godt.*, *Enc. Meth.*, IX, p. 354, n. 15.

Charaxes Xiphares, ♂, *Boisd.*, *App. Voy. de Deleg.*, p. 593.

♂ and ♀. Var. *Charaxes Cithæron*, C. & R. *Felder*, *Wien*.

[*Ent. Monatschr.*, Bd. III, taf. 8, f. 2. 3,

Expands 3 in. 8 lin.—4 in. 5 lin.

♂. *Black, glossed with violaceous-blue; and with violaceous-blue bands and spots. Fore-wing:* strongly glossed with blue from base; a median, transverse row of blue spots commencing immediately beyond extremity of discoidal cell, and extending to inner-margin beyond middle, where it is joined by the last two or three spots of another, straighter row of smaller blue spots, commencing on costa, not very far from apex, with two conspicuous white spots; along hind-marginal edge are observable some faint, small, pale-ochreous spots, one between each two nervules,—*except* between third median nervule and submedian nervule, where there are two such spots. *Hind-wing:* a broad, median, violaceous-blue band, widest about third median nervule, not reaching submedian nervule, narrowing to costa, and interrupted on first subcostal nervule—its lower, outer edge not far before anal angle; a row of seven or eight sub-lunulate, blue spots near and parallel to hind-margin; beyond it, bordering margin, a row of partly contiguous, thin, bluish lunules, becoming thinner and almost obsolete towards costa; two short black tails, rather slender, at extremities of first and third median nervules respectively,—the former the longer of the two. *UNDER-SIDE.*—*Pale, glistening, olivaceous-ochreous; with thin, blue-black, white-edged, transverse striæ. Fore-wing:* in discoidal cell, three blue-black, white-edged transverse striæ, and a fourth parallel

stria, less distinct, just beyond extremity of cell; two similar striæ *below* cell, short, transverse,—one above, the other below, third median nervule, the latter a little before the former; the position of the inner row of blue spots on *upper-side* is indicated by an olivaceous-whitish band, interrupted on first median nervule, and edged internally by a blue-black, white-bordered streak; in outer row of spots, the two first are *white* as on *upper-side*, the remainder ochreous yellow or whitish tinged with that hue,—the two last large and lunular, surrounded with blackish which, on the outer edge of the *lower* spot, forms a conspicuous double spot, violet-edged externally; hind-margin faintly stained with dull-yellow. *Hind-wing*: near base, two irregular, transverse, blue-black, white-edged striæ, commencing near costa, and extending to median nervure; a similarly-coloured, fainter stria inwardly bounds a rather narrow, irregular, olivaceous-whitish stripe from costa beyond middle to inner-margin a little before anal angle; this irregular stripe being bounded *externally* by some ill-defined, dull-yellowish, brown-tinged markings; bordering hind-margin, a row of lunular, violet, *inwardly* white-edged spots, becoming very indistinct towards costa, and immediately preceding a row of indistinct, contiguous, dull-yellow lunules; *tails* brownish.

♀. *Black, with a deep purple reflection; spots on fore-wing large and white, band on hind-wing pale-yellow. Fore-wing*: spots of inner row pure white, connected so as to form an obliquely-transverse stripe interrupted on first median, and extending to third median, nervule; the three spots that continue the row to inner-margin small and creamy-yellow, and seeming to belong more to the *outer* row of spots, though the *first* of the three is half white; in outer row, the first two are pure-white and rather large, the third, white tinged with yellow,—and the remaining spots wholly creamy-yellow; only the two lowest of the hind-marginal spots visible, ochre-yellow. *Hind-wing*: median band broader in proportion than in ♂, soft creamy-yellow, in some specimens nearly touching anal angle; row of lunular spots of a purer blue than ♂; row of contiguous lunules on margin *creamy-yellow*, conspicuous; *tails* similar to those of ♂. **UNDERSIDE.**—Similar to ♂, but *greyer and more glistening, with white transverse stripes. Fore-wing*: white band pure and conspicuous, continued narrowly to submedian nervure; outer row of spots conspicuous, particularly the lower two, of which the upper has likewise a violet-margined, large, outwardly bordering black spot—not, however, geminate; hind-margin stained with dull-yellow near anal angle. *Hind-wing*:

median stripe white, though not so brilliant as that of *fore-wing*; *beyond* band, and near inner-margin *before* it, a silver-grey tint; violet spots more lustrous than in ♂; dull-yellow lunular streak beyond them more apparent, and green-tinted at anal angle.

Var. A. (*Cithæron*, Felder).

♂. *Fore-wing*: on inner-margin, where the two transverse rows of blue spots meet, a large blue space, formed by their junction; three or four spots on hind-margin, near anal angle, *bluish* instead of yellowish. *Hind-wing*: central band whitish towards inner-margin, not extending to costa, save by two or three separate blue spots; lunules on hind-marginal edge *pale-yellowish* instead of bluish, but, as in typical ♂, becoming obsolete towards costa. UNDER-SIDE.—Coloured and marked as above described, but the irregular olivaceous-whitish transverse stripes *wanting*, or barely indicated by a slightly paler tint, though the striæ that bound them are distinct and strongly-marked.

♀. *More violet-glossed* than above described; *median band of hind-wing bluish-white* instead of creamy-yellow. *Fore-wing*: spots forming inner transverse row white, but larger, more contiguous, than in typical ♀, the band they compose not so completely interrupted on first median nervule, and continued interruptedly to inner-margin, where it is sometimes faintly tinged with bluish; spots in outer row as above described, but less distinct, the lower ones sometimes obsolete. *Hind-wing*: bluish-white median band rather wider on costa; rows of blue spots and yellow lunules as in typical ♀, perhaps *a little broader*. UNDER-SIDE.—Very similar to that described. *Fore-wing*: white transverse stripe from costa a little broader, especially on inner-margin. *Hind-wing*: median white stripe *wanting*, but *indicated by a paler space*, the striæ bounding it very distinct.

Woods and forests. Not uncommon.

December (m)—May (m).

At first sight, Felder's *Cithæron* would almost seem a good and distinct species, especially if one only regarded the upper surface of the female. I find it, however, impossible to consider it as distinct from *N. Xiphæres*, Cram., on a careful comparison of several specimens of both sexes with those of the species just named. The *upper-sides of the males*, and the *under-sides of both sexes* are so identical in pattern, and so nearly identical in colouring, that it is difficult to regard them as distinct. Messrs. Felder, while mentioning how nearly allied their species *Cithæron* is to *Xiphæres*, ground its rank to be considered distinct upon the differences ob-

servable on the upper surface, which are those mentioned in my description. The female is certainly a well-marked and distinct variety, and has hitherto only been brought from Port Natal.

This splendid *Nymphalis*, the largest found in South Africa, is by no means uncommon in the woods of Knysna and Plettenberg Bay: but, as Mr. Stainton remarks of the beautiful English "Purple Emperor" Butterfly (*Apatura Iris*, Linn. Sp.), "is oftener seen than caught." Their favourite haunts are the open spots on, or near, the outskirts of a wood; where they settle on the bark, or projecting twigs, of the trees, frequently glancing off, suddenly disappearing among or over the opposite trees, and as suddenly returning to the spot so abruptly left. I have several times seen three or four specimens together, settled high up on a lofty tree-stem, busily imbibing the moist exudations from its bark. When so engaged, they walk over a little space with much importance of action, contemptuously snapping their glossy wings at impertinent *Diptera* and other insects, who presume to share their repast. I have sometimes suddenly roused the female from quite a low bush, but she darted up and away with such velocity on these occasions, that a single vain stroke of the net was the most I ever had an opportunity of making. One day, however, this single instinctive sweep of the net was successful:—for Mrs. *Xiphæes*, as if indignant at her noontide repose being intruded on, darted from her seat of withered wild-vine stem, and actually rushed straight at me! Another half-minute, and, with the loss of one of her four tails, she lay impaled in my collecting-box, where I could gaze on her wild beauty without fear of her suddenly leaving me disconsolate. *Xiphæes* himself (formerly known as *Thyestes*) I never succeeded in capturing, though many narrow escapes has his violet-robed Majesty had from my hands. In fact, with the species of *Nymphalis*, it is generally only by some bit of good fortune that the collector ever obtains the Imago; though, by watching their habits, and constantly practising his strokes whenever they give him a chance, he has of course a greater likelihood of capturing these Butterflies. Four other specimens in my collection were taken at Knysna by some friends, who kindly presented them to me.

Knysna. Plettenberg Bay.—Coll. mihi.

South Africa. Port Natal.—Coll. Brit. Mus.

"Bashee River, British Kaffraria."—W. S. M. D'Urban, *in litt.*

98. *Nymphalis Ethalion*.

Charaxes Ethalion, *Boisd., App. Voy. de Deleg.*, p. 593,
[n. 83.]

Nymphalis Erithalion, *Doubl. Westw. Hewits., Gen. Diurn.*
[*Lep.*, pl. 48, f. 1.]

Nymphalis Erythalion, *Chenu, Enc. d'Hist. Nat.—Pap.*, f.
[267.]

♂. *Nymphalis Ephira*, *Hewits.*

Expands 2 in. 6 lin.—3 in. 1 lin.

♂. *Black, with a few blue dots. Fore-wing:* dusted with a few blue scales; beyond middle, close to costa, a shining-blue dot; two faint blue dots at anal angle. *Hind-wing:*

near anal angle, parallel to hind-margin, a row of a few, shining-blue dots; on hind-margin, above first median nervule, one or two *dull-red* lunules; from first median to anal angle, some greenish-ochreous lunules; a rather slender tail at extremity of both first and third median nervules. **UNDER-SIDE.**—*Dull brownish-olivaceous*, with blue-black, occasionally white-edged, transverse striæ; an irregular streak from costa of fore-wing near apex, to near anal angle of hind-wing, running near, and almost parallel to, hind-margins. *Fore-wing*: two dusky-blackish spots near anal angle. *Hind-wing*: red and olivaceous lunules much more distinct than on *upper-side*; —the transverse streak crossing both wings is *in this wing* immediately succeeded by a row of dull-red lunular markings.

♀. *Brownish-black, glossed with violet-blue: transversely striped and spotted with white.* *Fore-wing*: on costa, a little beyond middle, commences a transverse row of white spots, interrupted on second discoidal nervule, and from first median nervule widening into a gradually-broader band of contiguous white spots, violet-margined on each side, to inner-margin a little beyond middle; on costa, near apex, commences a second row of smaller white spots, tinged with ochreous or bluish, extending to about middle of inner row of spots, where it becomes almost obliterated. *Hind-wing*: white, violet-margined band of *fore-wing* continued more broadly across middle of this wing to just before anal angle; a row of seven more or less distinct, white lunules, parallel to hind-margin; on hind-marginal edge, the olivaceous and red lunules are larger and distincter than in ♂, those of the latter colour extending to apex. **UNDER-SIDE.**—Similar to that of ♂, *but paler and more glistening; with transverse white band in fore-wing.* *Fore-wing*: white band less distinct than on *upper-side*; blackish spots near anal angle larger than in ♂. *Hind-wing*: a very indistinct, irregular, olivaceous-whitish median band, outwardly edged with a blackish streak; the dull-reddish, lunular markings, immediately succeeding band, larger and more contiguous than in ♂; hind-marginal lunules as in ♂, but more conspicuous.

Whether Boisduval intended to call this species *Erithalion* I know not, but I have given the name as printed at the head of his description in the Appendix to M. Delegorgue's Travels. The figure in the "Genera of Diurnal Lepidoptera" which is named *Nymphalis Erithalion* was published three years subsequently to Boisduval's description; but was so named, I believe, from a manuscript label of the French author just mentioned, attached to a specimen of the Butterfly in the British Museum.

Both the figure and description referred to are of the *female* of this species; but no doubt can be entertained, on comparing the insects, that the specimens for which Mr. Hewitson proposed the name of *Ephira*, are really males of *Ethalion*.

This species appears peculiar to South Africa, and has, as yet, only been taken at Natal. I am nearly certain that I once noticed the male insect on the borders of a wood at Knysna, on December 23rd, 1858. The Butterfly flew twice from the edge of the wood over the hill-side rising above it, and attracted attention from its very black appearance, as it rapidly passed me. I can think of no other species resembling it both in size and colour.

Port Natal.—Coll. Brit. Mus., et Coll. W. C. Hewitson.

99. *Nymphalis Tiridates*.

Papilio Tiridates, *Cram.*, *Pap. Exot.*, pl. 161, f. A, B.

„ „ *Dru.*, *Ill. Nat. Hist.*, III, pl. 23, f. 1, 2.

„ „ *Fab.*, *Spec. Ins.*, II, p. 11, n. 43.

„ „ *Herbst*, *Nat. Bek. Ins.*—*Schmett.*, IV, [pl. 62, f. 3, 4.

Nymphalis Tiridates, *Godt.*, *Enc. Meth.*, IX, p. 354, n. 14.

Charaxes Tiridates, *Boisd.*, *App. Voy. de Deleg.*, p. 593.

Expands 3 in. 7 lin.—3 in. 11 lin.

Black, glossed with metallic deep-blue; and with transverse rows of blue spots. Fore-wing: blue brightest at base; beyond discoidal cell, a little below costa about middle, is the first of an obliquely-transverse row of four blue spots, tending towards anal angle, and meeting an outer, transverse, slightly-waved row of similar spots, extending from costa near apex to inner-margin not far from anal angle; hind-margin varied with a row of conspicuous, dull-ochreous, lunular marks. Hind-wing: blue gloss brightest near base; near hind-margin, two rows of sub-lunular blue spots, the outer row parallel to hind-margin, the inner, more irregular; two rows of dull-ochreous lunules along hind-margin; two short, black, tails, at extremities of first and third median nervules, respectively—the former the longer of the two.

UNDER-SIDE.—*Shining, dull-olivaceous grey; with blue-black, white-edged, transverse strice, and dull-yellow spots. Fore-wing: three transverse stricæ in discoidal cell; one just beyond it; two short stricæ beneath cell—one above, the other below, third median nervule; a dentate, externally white-edged, blue-black stripe, from first median nervule beyond cell, almost to inner-margin near anal angle; the outer row of blue spots, on the upper-side, represented by dull-yellow, larger spots, increasing in size near inner-margin, the two last being internally black-margined, and externally with two blue-black, violet-edged spots. Hind-wing: some transverse stricæ, near base, enclose a space of dull-yellow:*

a very irregular, interrupted streak, from costa, just before middle, to inner-margin, a little before anal angle; between this streak and hind-margin, a waved row of greenish-yellow lunules; beyond this, a row of minute, white, violet-tinged, dots, the two largest at anal angle; two rows of yellowish lunules along hind-margin, indistinct; a *green* space at anal angle.

Boisduval (on whose authority I include this Butterfly among the South African species), mentions *N. Tiridates* among the *Rhopalocera* collected by M. Delegorgue to the North of the Colony of Natal; and remarks that "specimens from Moselekatze's Country are entirely like those of the West Coast."

Sierra Leone. Ashanti.—Coll. Brit. Mus.

"Moselekatze's Country."—Boisd., App. Voy. de Deleg., [p. 593.

100. *Nymphalis Brutus*.

Papilio Brutus, *Cram.*, *Pap. Exot.*, pl. 241, f. E. F.

Papilio Cajus, *Herbst*, *Nat. Bek. Ins.*—*Schmett.*, pl. 64, [f. 1, 2.

Eribæa Brutus, *Hübner*, *Verz. Bek. Schmett.*, pl. 47, n. 422.

Nymphalis Brutius, *Godt.*, *Enc. Meth.*, IX, p. 351, n. 3.

Expands 3 in. 4 lin.—4 in. 1 lin.

Brownish-black; with a gradually-widening, yellowish-white band, beyond middle, from costa of fore-wing to near inner-margin of hind-wing. Fore-wing: a greenish gloss over basal portion; the first five spots of the transverse, yellowish-white band, which commences not far from apex, distinctly separate from each other,—the remainder confluent as far as inner-margin, where the band is widest; along hind-margin, between nervules, a row of small, reddish-ochreous spots. *Hind-wing:* the transverse band prolonged across this wing, as a broad, continuous, yellowish-white, median band, as far as submedian nervure; along hind-marginal edge, a row of narrow bluish, or greenish, lunules, sometimes yellow-tinged, always more or less obliterated towards costa, and sometimes quite *obsolete*, except two or three imperfect lunules near anal angle; a little before these lunules is a row of pale-blue spots, of which only two large ones at anal angle are usually visible; tails on first and third median nervules slender, rather long, black, the *former* the longer of the two. UNDER-SIDE.—*Rich chocolate-red; with numerous white-margined, metallic-centred, blackish transverse striæ and spots; the transverse white band very conspicuous, glistening, continuous throughout. Fore-wing:* five of the white-margined striæ described on costa,—three in discoidal cell, one at its extremity, and one beyond middle, its lower end touching transverse white band;

three similar striæ *below* cell,—one immediately beneath the third stria in cell, the other two (whose outer white edging is merged in transverse band) situate one above, the other below, second median nervule; two faint-blackish marks in transverse, glistening-white band, close to costa; beyond white band, the ground-colour is more *ochreous* in tint, and marked with a transverse row of triangular, or sub-triangular, blackish marks, outwardly edged with glistening-whitish, (except the two last and largest, below third median nervule, which are contiguous, and edged outwardly with greyish-blue); on hind-margin, a greyish mark at extremity of each nervule, and a yellowish tinge *between* nervules; before transverse white band, and touching it, beneath third median nervule, a large, somewhat quadrate, blackish spot, *not* with a metallic centre; the space between it and base *dull ochreous*. *Hind-wing*: at base, on costa, an elongate spot, coloured similarly to striæ in *fore-wing*, and like them margined with glistening white; inner-marginal edge bordered with a black, *inwardly* white-margined streak near base, where its outline is most strongly convex; obliquely crossing the *deeply-grooved portion* of wing are three elongate, glistening striæ, like those above described, white-margined on both sides, the second and third united by a curve at their lower and outer extremity (where, close to inner-margin, they meet the broad transverse white band),—and the third likewise united, by a curve in the opposite direction from the same extremity, to a similar elongate streak lying in the fold where the swelling of the side of the *groove* commences; this latter streak seems continuous of a transverse row of three short, similarly coloured, contiguous marks from costa, which it meets on median nervule, very little removed from base; near end of cell is a similar, curved streak, which is continued *downwards and outwards* by a further streak of the same colours that, touching the streak lying in the fold of wing, suddenly curves *upward* at its extremity, where it meets white transverse band; broad, transverse white band *more glistening* than that in *fore-wing*, more sharply-defined than on *upper-side*, continued conspicuously *to inner-marginal edge*, a little before anal angle, edged *inwardly* by a row of metallic-centred, small spots of variable size, (the outer portion of whose white margins is merged with the band itself) as far as third median nervule,—and *outwardly* by an ill-defined, blackish streak, which always becomes obsolete towards costa, about second subcostal nervule; beyond band, two transverse rows of dull-blackish, sub-lunular marks, edged, the first *exteriorly*, the second *interiorly*, with metallic glistening-whitish, thin rays of which,

between nervules, in some places unite the two rows; between second and third median nervule, these two rows unite *almost wholly*, forming a large, imperfect, steely ocellus, black-ringed, and with a pale-blue pupil in its outer half; a similarly-coloured, but larger, and perfect ocellus, bipupillate with blue, succeeds at anal angle; around it, and bordering hind-margin, for the greater part, is a yellow-ochreous space; hind-margin narrowly bordered with a black edging, which is very thinly edged with *whitish* inwardly and outwardly.

The *under-side* of this fine *Nymphalis* is exceedingly beautiful, and strongly characteristic of the Genus, while its numerous and intricate markings render a detailed description of it a difficult and lengthy matter. I once saw *Brutus*, or a closely-allied species, settled on the sprig of a young tree in one of the Knysna woods; but had a very short time granted me to admire the conspicuously-marked and glittering under-surface of its wings—*Nymphalis* ending the “silent ecstasy” by one of those much-to-be-deplored, abrupt departures, so habitual to the tribe.

Natal.—Coll. S. A. Mus.

Port Natal. West Africa. Sierra Leone.—Coll. Brit. Mus.

101. *Nymphalis Pelias*.

Papilio Pelias, Cram., *Pap. Exot.*, pl. 3, f. C, D.

„ „ *Herbst, Nat. Bek. Ins.*—*Schmett.*, IV, pl. 63, [f. 5, 6.

Eriboea Pelopia, Hübn., *Verz. Bek. Schmett.*, p. 47, n. 424.

Nymphalis Pelias, Godt., *Enc. Meth.*, IX, p. 351, n. 2.

Expands 3 in. 5 lin.—3 in. 7 lin.

♂. *Black*; with warm yellow-ochreous, transverse, stripes and rows of spots. *Fore-wing*: a ferruginous-ochreous tint suffuses wing from base, extending to extremity of discoidal cell on costa, and to a little before middle on inner-margin; near extremity of cell, touching subcostal nervure, a rounded black spot; costa narrowly bordered with ferruginous-ochreous to considerably beyond middle, as far as the commencement of a broad, transverse, yellow-ochreous band, extending to inner-margin about middle, where it is paler; the inner edge of this band is rather irregularly dentate, while its outer edge is regularly serrated by deep indentations of black, on the nervules, as far as third median nervule—the band being further marked with a row of six black spots near its outer edge, from costa as far as third median nervule, completely dividing the band in its upper portion; along hind-marginal edge, a row of eight rather large, deep-ochreous spots of uniform width, the last of which, just above anal angle, is geminate. *Hind-wing*: basal portion pale brownish-ochreous with a ferruginous tint, mostly clothed with long hairs; transverse band of *fore-wing* continued across this wing by a

short, paler band, whitish-ochreous on costa, thence narrowing and darkening towards anal angle as far as second or third median nervule, where it becomes obsolete, among the ochreous and greyish hairs on that portion of wing; a row of seven rather wide lunules along hind-margin (which is narrowly black-edged)—the first lunule wholly warm-ochreous—the second, third, and fourth, ochreous with thinner or broader white ends—the fifth and sixth white, varied with bluish-green—the seventh, at anal angle, yellowish-green; before and parallel to lunules, a row of four blue spots, diminishing from anal angle as far as discoidal nervule; two rather short, acute, slender, black tails on hind-margin, about equal in length, at extremities of first and third median nervules respectively; anal-angular portion rather markedly produced, much more so than in *N. Brutus*. UNDER-SIDE.—Very similar to that of *N. Brutus*. *Fore-wing*: deep-ferruginous as far as transverse band, which is *pure-white* (instead of ochreous as on *upper-side*); a longitudinal white streak between costal edge and nervure; white-margined, blackish striæ marking the ferruginous arranged as in *Brutus*, but *broader* and more spot-like, and with a greenish tint in their metallic centres—particularly the one on costa beyond extremity of cell, which touches inner edge of transverse band; immediately beneath the latter is a similar, much smaller, marking, *not* present in *Brutus*; the white-margined striæ beneath cell less distinct, and confluent; ochreous space, between base and quadrate black marking below third median nervule, *duller and greyer* than in *Brutus*; white, transverse band marked near costa with two yellow-ochreous dashes—its row of black spots much smaller than on *upper-side*, and bounded exteriorly by a row of yellow-ochreous, sagittate marks, representing outer portion of band; ground-colour beyond band soft, pale, slaty-grey, with a bluish tinge; a transverse row of seven rounded, black spots immediately succeeding and touching ochreous, sagittate ones—the last, below third median nervule, being large, suffused, and indistinctly geminate (as in *Brutus*), and outwardly bordered by a tint bluer than ground-colour; hind-marginal row of spots as on *upper-side*. *Hind-wing*: arrangement of white-margined striæ before transverse band almost precisely that of *Brutus*; the junction of those crossing the inner-marginal groove not so rounded, and the striæ *more sinuate*; the short, white-edged markings bounding inner edge of transverse band united, so as to form a continuous stripe; band itself *pure-white*, much narrower than in *Brutus*, continued to inner-margin, *not* black-edged outwardly (excepting close

to inner-margin), and usually marked with a slender, black spot, just above first median nervule; succeeding band, the ferruginous ground-colour still extends in the form of a parallel stripe, very deeply indented, on nervules, by the greenish-grey ground-colour that ensues; hind-marginal lunules merged into a rather broad stripe, varied white and greenish; before which is a row of outwardly black-edged, glistening-violet, lunular spots, increasing in size to anal angle, where the largest is *geminate*, surrounded by olive-grey, which is bounded *inwardly* with pale-yellow, *outwardly* with pale-green.

♀. Quite similar to ♂, *but paler and duller in colours.*

The only specimens of this handsome species that I have seen were taken in Damaraland; one at Otjimbingue by Mr. H. Hutchinson, and several others by Mr. C. J. Andersson in various parts of the country mentioned. Damaraland being, however, to the North of the Tropic Line, is out of the province I have laid down as South Africa *par excellence*; and my only authority for including *Nymphalis Pelias* in my list is the rather doubtful *habitat* of "Cape of Good Hope," assigned to it by Cramer. In this instance, however, the old Dutch author is probably right in his locality; for, Damaraland being so far to the South, there is no reason why *Pelias* should not extend into the woods of the extra-tropical region. Cramer's figure, though rough and not correctly coloured, is yet very truthful in regard to markings; and I was reminded of it at once, on seeing the first specimen of this *Nymphalis* sent to the South African Museum. Herbst, who has apparently copied Cramer's figure, gives *Guinea* as the *habitat* of this species, which he confounds with Drury's *Eudoxus*.

Damaraland.—Coll. mihi et Coll. S. A. Mus.

†102. *Nymphalis Jahlusa*.

——— *Jahlusa*, *Boisd.*, *MS.*

Expands 2 in. 5 lin.

Pale reddish-ochreous, with transverse rows of black spots.

Fore-wing: ground-colour deeper in tint near base; in discoidal cell a small black spot, succeeded by a curved, elongate, black mark; a narrow, black streak at extremity of cell; immediately beyond it, a small, quadrate, black spot; two spots below median nervure; a transverse row of six spots of the same colour, beginning on costa beyond middle, and curving towards basal half of inner-margin; from costa, near apex, a transverse row of six spots of the same colour, beginning on costa beyond middle, and curving towards basal half of inner-margin; from costa, near apex, a transverse, blackish, macular streak, succeeded by a row of blackish, lunular spots, running parallel and close to hind-margin. *Hind-wing*: several small black spots in central portion; near and parallel to hind-margin, a row of broad, black

lunules, united by their lower angles to a thin, black stripe, running between them and hind-margin; a narrow, black edging to hind-margin, which bears two short, thin, black tails, at extremities of first and third median nervules respectively. **UNDER-SIDE.**—*Fore-wing*: pale pinkish-ochreous; costa and apical portion pale-olivaceous; black spots as above, but smaller, more sharply defined, and with *silvery* margins; two additional spots close to base—one in discoidal cell, and the other immediately *above* it, on costal nervure; a silvery, quadrate space on costa near apex, succeeded by a transverse row of five *silvery* spots, commencing on costa, and continued to anal angle by two lunular, blackish, reddish-bordered spots. *Hind-wing*: pale olivaceous-brownish; with two transverse rows of *bright-silvery*, black-edged spots—one before, the other beyond, middle; band parallel to hind-margin *orange-ochreous*, with several *silvery* spots on its inner edge—one of which, between first and second subcostal nervules, is large and circular; beyond band is a thin, *bluish-silvery* streak, parallel to hind-margin, followed by a row of dull, pinkish-white lunules, which are bordered *outwardly* by another *bluish-silvery* streak; hind-margin narrowly bordered with yellowish *edged with silvery*.

This very curious and beautiful little *Nymphalis*, which in colouring and marking so singularly resembles the silver studded species of *Argynnis*, Fab., is, I believe, *unique* in the collection of the British Museum. While making the above description from the specimen in question, I found the MS. name of *Jahlna* attached to it, and was informed by the curator that the label was one of Dr. Boisduval's. The insect was taken in some part of Southern Africa by Sir A. Smith, but whether within or out of the Tropic is unknown. Like the other species of the Genus, it is probably a sylvan Butterfly, and likely to occur in the Natal forests. The *brilliant silvery spots of the under-side* are at once sufficient to identify the species.

Interior of South Africa.—Coll. Brit. Mus.

103. *Nymphalis Zoolina*.

Nymphalis Zoolina (Westw. M.S.), Doubl., Westw.,
[Hewits., Gen. Diurn. Lep., pl. 53, f. 1.
——— Angas, Illustr. Port Natal, Ins.,
[pl. 1, f. 7.]

Expands 2 in. 6 lin.—3 in.

Fore-wing angulated at extremity of fifth subcostal nervule, the *apical portion* being much produced and truncate. *Hind-wing* considerably produced at anal angle.

Pale whitish-sulphureous; with dark-brown margins, and transverse markings. Fore-wing: costa edged with dark-brown; a dark-brown dot in discoidal cell, touching subcostal nervure; at extremity of cell, a well-defined, closing, trans-

verse stripe of the same hue; beyond middle, a variable, somewhat quadrate brown mark, on costa, commences an irregular, thin stripe of that colour, extending to near anal angle, where it becomes merged with the broad, dark-brown, hind-marginal band; band on hind-margin broadest at apex, where it contains an ovate spot of the ground-colour. *Hind-wing*: on hind-margin, an irregular, dark-brown band, containing seven pale spots,—six of the ground-colour, and one (at anal angle) violaceous; just before band, a thin, waved stripe, as in *fore-wing*; hind-margin narrowly bordered with orange, edged with brown,—the orange hue extending a little before brown band, at anal angle; two orange, brown-edged tails, rather long and *spatulate*, at extremities of first and third median nervules respectively. UNDER-SIDE.—*Paler, glistening, greener in tint*. *Fore-wing*: costa brownish; a brown streak crosses discoidal cell; another broader stripe, of the same colour, crosses wing from costa at extremity of cell; hind-marginal stripes as on *upper-side*, but the *outer* one containing a row of whitish lunules. *Hind-wing*: transverse stripe of *fore-wing* continued across this wing, almost to anal angle; a longitudinal, brown streak from base to just before anal angle; *inner* hind-marginal band distinct, *outer* one thin—the two enclosing a row of large, broad, whitish lunules; hind-margin ochreous; two or three deep-indigo, white-centred spots, near anal angle; tails whitish, black-edged.

This species and the following one (*N. Neanthes*, Hewits.), possessing such a different outline of wing and caudal appendages, seem to have a right to be considered as a distinct Genus from *Nymphalis*. The specimens of *N. Zoolina* in the British Museum are all females, and possess two tails on *each* hind-wing; but, as the male of the very closely allied *Neanthes* has *but one tail* (on the third median nervule), I have little doubt but that the male *Zoolina* has, likewise, two tails less than his partner. The insect would seem to be rather uncommon at Natal; and is not mentioned by Boisduval among the captures of M. Delegorgue.

Port Natal.—Coll. Brit. Mus.

104. *Nymphalis Neanthes*.

Nymphalis Neanthes, Hewits., *Exot. Butt.*, pl. 44, f. 2, 3. Expands 2 in. 3 lin.—2 in. 8 lin.

Outline of wings like that of *N. Zoolina*: ♂ with *only one tail* on hind-wing, at extremity of third median nervule.

Glossy reddish-ochreous; with ferruginous-brown markings, *Fore-wing*: ferruginous-brown streak at extremity of dis-

coidal cell sometimes (in ♂) extends below cell; hind-marginal band and streak arranged *exactly* as in *Zoolina*—but in the ♂ so close together, that the interrupted portion of ground-colour between them appears as a row in continuation of the ovate, apical spot, which is situate as in *Zoolina*, and of the ground-colour. *Hind-wing*: band and stripe bordering hind-margin arranged as in *Zoolina*, of a paler colour than those in fore-wing, and *closer to each other in ♂ than in ♀*; close to hind-margin, a row of greyish-blue, outwardly black-edged lunules, obliterated towards costa, well-marked next anal angle, more apparent in ♀. **UNDER-SIDE**.—*Dull-ochreous, irrorated with brown*; paler in ♀. *Fore-wing*: costa edged narrowly with *silvery*, broadest and brightest at base; hind-margin, from costal edge to anal angle, with a rather broad, scarcely silvery, *glistening* border; transverse stripe from costa, at extremity of cell, as in *Zoolina*, but *dull-brown*, inwardly edged with a *silvery streak*; hind-marginal band obliterated; the streak within it indicated by a row of faint-blackish dots. *Hind-wing*: silvery-edged, transverse stripe of *fore-wing* continued, as in *Zoolina*, to a little distance before anal angle; greater portion of wing with the same *glistening* appearance as hind-margin of *fore-wing*; a few ill-defined, faint-blackish spots indicate position of stripe within hind-marginal band—which, as in *fore-wing*, is obliterated; hind-marginal lunules small and indistinct—the one at anal angle outwardly bordered with pale dull-yellow.

This Butterfly, except for the strong difference in ground-colour, is so curiously like *N. Zoolina*, that one is almost inclined to look upon it as an extraordinary variety of that species. Like *N. Zoolina*, Mr. Hewitson's *Neanthes* has hitherto only been brought from the Natal Colony.

Port Natal.—Coll. Brit. Mus.; et Coll. W. C. Hewitson.
Natal.—Coll. S. A. Mus.

Genus PHILOGNOMA.

Philognoma, *E. Doubl.*
Nymphalis, *Godt.*

IMAGO.—Closely allied to *Nymphalis*. *Head* not so densely clothed with down; *eyes* smooth, not so prominent; *palpi* rather more widely apart; *antennæ* similar to those of *Nymphalis*. *Thorax* very robust (but less so than in the Genus just named), clothed with short, velvety down, hairy posteriorly. *Fore-wings* with the apex so produced as to be *almost falcate*: costa strongly arched (much more so than in *Nymphalis*); hind-margin considerably hollowed in centre; anal angle well-marked, though slightly rounded. *Hind-*

wings more ovate than in *Nymphalis*, less prominent in apical region: hind-margin very slightly scalloped, tailed only at extremity of first median nervule—the tail being short, but broader than in *Nymphalis*, sub-spatulate, and somewhat inclining outwards; anal angle more marked, being less rounded; inner-margins as in *Nymphalis*. *Legs* stout, and of moderate length. *Abdomen* small, slender, short, ovate in ♀.

This limited African Genus has a single representative South of the tropic of Capricorn.

This Butterfly is a large and handsome insect, inhabiting the outskirts of woods, and is by no means uncommon where it occurs. The possession of but one tail on the hind-wing, at the extremity of the first median nervule, at once distinguishes it from the species of *Nymphalis*; for although the male of *N. Neanthes*, Hewits. (and probably also of *N. Zoolina*, Westw.) has, as already described, but one tail—that appendage is situated at the extremity of the *third* median nervule.

105. *Philognoma* Varanes.

Papilio Varanes, *Cram.*, *Pap. Exot.*, pl. 160, f. D, E;
[pl. 388, f. A, B.

„ „ *Drury*, *Ill. Nat. Hist.*, III, pl. 31, f. 1, 2.

„ „ *Fab.*, *Spec. Ins.*, II, p. 14, n. 55.

„ „ *Herbst*, *Nat. Bek. Ins.*—*Schmett.*, IV,
[pl. 56, f. 3, 4, 5.

„ „ *Fab.*, *Ent. Syst.*, III, 1, p. 66, n. 206.

Coëa Varanessa, *Hübner*, *Verz. Bek. Schmett.*, n. 442.

Nymphalis Varanes, *Godt.*, *Enc. Meth.*, IX, p. 304, n. 48.

Expands 3 in. 2 lin.—3 in. 8 lin.

Rich-ferruginous, spotted with warm orange-ochreous; basal portion of fore-wing pale-yellowish shading into orange-ochreous, of hind-wing, silky-white. *Fore-wing*: narrowly white on inner-margin, gradually shading through dull-yellow into orange-ochreous, which latter colour occupies middle; three short, transverse, ferruginous marks, on the ochreous portion—one just beyond extremity of discoidal cell—another between first and second median nervules, *below*, and slightly *beyond*, the first mark—the third between second and third median nervules, vertically in a line with the first mark; outer half of wing dark-ferruginous, which colour commences abruptly just beyond the three marks described, indenting the orange-ochreous between median nervules; beyond middle, two transverse rows of orange-ochreous

spots, the outer row parallel to hind-margin, the *inner* somewhat *sinuate*—the spots of the *outer* row thinner and more lunular than those of the inner; neither row extending below submedian nervure, and *both* with the spot next costa often indistinct; between the two rows is another of *dark* spots, more apparent in ♀ (whose ground-colour is paler). *Hind-wing*: basal portion, to beyond extremity of discoidal cell, *glistening-white*; along submedian nervure, from base, a dense clothing of silky, white hair, not extending to anal angle; rest of wing ferruginous, inclining to ochreous near costa and next basal white; two rows of ochreous spots in *fore-wing* indistinctly continued in this wing, the row of dark spots distinctly so, diminishing in size from subcostal nervure as far as second or third median nervule; bordering hind-margin, a row of thin, dull-blue lunules, of which the three next anal angle are the most conspicuous, being *outwardly* very thinly white-edged; tail at extremity of first median nervule brownish-ferruginous, slightly widened at its tip, from two to three lines in length. UNDER-SIDE.—*Very variable*: *dull greyish-brown, inclining to ferruginous, with pale-green nervures*; *outer portions of wings more or less glistening* (as in *Nymphalis Neanthes*, Hewits.) *Fore-wing*: crossing discoidal cell, three transverse, more or less distinct, strongly waved and angulated, grey lines, sometimes defined with glistening-silvery outwardly, the third extending almost to submedian nervure; a little beyond cell, a fourth, similar, longer, interrupted line, about middle, also nearly reaching submedian nervure; beyond middle, a slightly-curved, transverse, continuous, dark-grey streak, *glistening-silvery externally*, from costa to below third median nervule; beyond this, the surface is more or less washed with glistening-silvery, which does not, however, extend to hind-margin, except at apex and at anal angle; parallel to hind-margin, a row of more or less indistinct, dark-grey spots, from costal edge to submedian nervure. *Hind-wing*: before middle, three transverse, much-angulated, zic-zac, grey lines, similar to those in *fore-wing*—the two outer lines sometimes extending nearly to inner-margin; transverse streak of *fore-wing* continued completely across this wing, from costa beyond middle, to inner-margin immediately before anal angle; surface beyond streak much washed with glistening-silvery (usually *more so* than in *fore-wing*); an imperfect, greyish, ferruginous-ringed ocellus, next streak, close to costa, and two similar, more imperfect ocelli, between anal angle and second median nervule; bordering hind-margin, a row of rather indistinct, glistening, greyish lunules.

A female specimen, taken at Knysna, in my collection, differs from the above description; having the *under-side* dull-ochreous, strongly tinged with *olive-green*; the waved lines and transverse streak very distinct, and steely-bluish; the silvery gloss more brilliant; and the ocelli in *hind-wing* with their upper edges strongly marked with dark-brown, four very indistinct ocelliform markings completing a transverse row, parallel to hind-margin.

Some Natal specimens of *P. Varanes*, in the South African Museum, have the basal white in fore-wing almost as widely extended as in hind-wing; but do not differ in other respects.

Not uncommon. Woods and copses.

September (e)—June (b).

The habits of this singularly-hued Butterfly are almost precisely those of *Nymphalis Xiphæres*, Cram.; but it is a "thought" less rapid in its flight, and is much more frequently to be found about bushes, or young sapling trees. Like other species of NYMPHALIDÆ, this insect much affects some particular spot; and having chosen a convenient, projecting twig, will constantly return to it, as a resting-place after the frequent short and rapid excursions that *Varanes* delights to take. The male habitually flies at a much lower elevation than *N. Xiphæres*, except when battling with others of his sex, or in pursuit of a coy female; and, with a tolerably long-handled net, an expert collector will frequently succeed in capturing him. It sometimes happens that the female descends to a low bush, and quietly sits thereon, while the male hovers about her; on such occasions, one or both may be taken without much difficulty. *P. Varanes* is fond of the resinous exudations on the bark of trees, but appears to be more wary while feeding than at other times. I attracted a specimen at Plettenberg Bay, by smearing some honey on the trunk of a large tree in one of the densely-wooded kloofs so common in that part of the Colony. This plan of enticing the NYMPHALIDÆ should be persevered in by those dwelling in wooded districts, as it would most likely procure them specimens of the various known species of *Nymphalis* (ordinarily so difficult of capture), and very possibly lead to the discovery of new species.

Knysna. Plettenberg Bay.—Coll. mihi.

Natal.—Coll. S. A. Mus.

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South Africa (Zoolu). Sierra Leone. Ashanti.—Coll. Brit. Mus.

A D D E N D A .

Pieris Agathina, Cram. Sp.—p. 28. (*Variety C.*)

Additional locality: Butterworth, Kaffraria.—Coll. J. H. Bowker.

Pieris Severina, Cram. Sp.—p. 32.

Additional locality: Butterworth, Kaffraria. (J. H. Bowker.)—Coll. mihi.

Pieris Mesentina, Cram. Sp.—p. 35.

Additional locality: King William's Town (Mrs. Tyrwhitt Drake.)—Coll. mihi.

Pyrameis Cardui, Linn. Sp.—p. 119.

Additional locality: Butterworth, Kaffraria.—Coll. J. H. Bowker.

An interesting VARIETY of this Butterfly, as a rule so remarkably constant in its pattern, was taken by Mr. D'Urban at King William's Town. The following are its peculiar characters:

Fore-wing: suffused with blackish, to the confusion of the ordinary markings; large apical white spot obliterated; blackish border at anal angle broad and suffused. *Hind-wing*: blackish suffusion over the whole costal region as far as apex; row of black spots faint, whitish-centred; hind-marginal rhomboidal spots not contiguous. UNDER-SIDE.—Similarly suffused. *Fore-wing*: large apical spot wanting; anal angle varied with whitish. *Hind-wing*: blackish suffusion, obliterating costal and disco-cellular white markings; nervures yellowish-white; 1st, 3rd, and 4th ocelli whitish, indistinct, merged in a white and greyish band immediately succeeding them.

I believe that I saw this variety of *P. Cardui* near Cape Town this month (December, 1861).

Junonia Enone, Linn. Sp.—p. 125.

The following are additional known localities for this species:

“Port Elizabeth.”—D'Urban.

“Damara-land.”—Coll. C. J. Andersson.

“Somauli-land.”—Felder.

“Universal along the East Coast of Africa.”—E. L. Layard.

Junonia Archesia, Cram. Sp.—p. 133.

Additional locality: Knysna (Miss Wentworth.)—Coll. mihi.

APPENDIX I.

LIST OF ENTOMOLOGICAL WORKS QUOTED, WITH THE ABBREVIATIONS USED IN REFERENCE.

N. B.—Works marked thus * are in the South African Public Library. To works marked thus † I have had no opportunity of reference, and depend upon other authors for correctness of quotation.

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- * DONOVAN, E.—The Naturalist's Repository, or Monthly Miscellany of Exotic Natural History, &c. 5 vols., 1823—4—5—6 and 7, respectively. London.—*Don. Nat. Repos.*
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 * The Natural History of British Butterflies. 1 vol. Edinburgh, 1835.—*Duncan, Brit. Butt.*
 * The Natural History of Foreign Butterflies. 1 vol. Edinburgh, 1837.—*Duncan, For. Butt.*
- FABRICIUS, I. C.—Systema Entomologiæ, &c. 1 vol. Flensburgi et Lipsiæ, 1775.—*Fab., Syst. Ent.*
- † FABRICIUS, I. C.—Genera Insectorum. 1 vol. Chilonii, 1776. *Fab., Gen. Ins.*
- † FABRICIUS, I. C.—Species Insectorum. 2 vols. Hamburgi et Kilonii, 1782.—*Fab., Spec. Ins.*
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- † FABRICIUS, I. C.—*Systema Glossatorum*,—in Illiger's Magazine* for 1807.—*Fab., Syst. Glossat.*
- * Magazin für Insektenkunde. 6 vols. Brunswick, 1802—07.
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APPENDIX II.

GLOSSARY OF ENTOMOLOGICAL TERMS EMPLOYED IN THIS VOLUME.

Abdomen, vide Plate I.

Abrupt, suddenly commenced, formed, or terminated.

Anal, of or belonging to the hinder extremity of the body.

Anal angle, vide Plate I.

Anal-angular, on or near anal angle.

Annulations, rings or joints of the body.

Annulose, composed of rings.

Antennæ, vide Plate I.

Apex, vide Plate I.

Apical, on or near apex.

Appressed, lying flatly against.

Articulations, joints.

Band, a broad, even stripe.

Base, vide Plate I.

Bifid, forked, split or divided into two.

Blotch, a rather large marking, of irregular form.

Caudal, of or belonging to tail.

Caudate, tailed.—*Vide* Plate I.

Chrysalis, vide Introduction, and "Pupa."

Cilia, fringe of hair-like scales on hind-margins of wings.—*Vide* Plate I.

Clavate, clubbed, or knobbed at extremity.

Cocoon, a case formed by many caterpillars when about to assume the chrysalis state.

Common, belonging to more than one. (Used in regard to a marking occupying a portion of both fore and hind wings.)

Concave, hollowly curved, excavated.

Congener, belonging to the same *Genus* as one or more other species.

Contiguous, touching one another.

Convergent, directed towards one point.

Convex, prominently curved, arched outward.

Costa, vide Plate I.

Costal, on or close to costa.

Coxa, first joint of leg, the hip.

Crenelated, with small rounded projections.

Dentate, toothed, with pointed, regular projections.

Denticulate, with small teeth.

Disc, vide Plate I.

Discoidal, on or belonging to disc.

Discoidal cell, vide Plate I.

Divergent, directed apart from each other,

Emarginate, scooped out, hollowed.

- Entire*, without dentations or projections.
Excavate, vide "Concave."
Externally, outwardly, on the side further from the *Thorax*.
Falcate, hooked or recurved.
Family, an assemblage of allied *Genera*.
Fascia, a broad *transverse* band.
Femur, third joint of leg, the thigh.
Ferruginous, the colour of iron rust.
Fore-wing, vide Plate I.
Fringe, vide "Cilia."
Geminate, double, paired.
Genus, a collection of allied *Species*.
Glauous, pale-bluish or hoary green.
Globose, roundly prominent, like a globe.
Granulated, roughened like granite.
Hatched, closely marked with numerous thin, very short transverse lines.
Haustellum, proboscis, trunk, or sucker.—Vide Plate I.
Hind-margin, edge of wing furthest from thorax.—Vide Plate I.
Hind-marginal, on or near hind-margin.
Hind-wing, vide Plate I.
Hirsute, clothed with long, thick hair.
Hyaline, quite transparent, like clear glass.
Imago, the perfect insect—the type or image of its *species*.
Inner-margin, edge of wing opposite costa.—Vide Plate I.
Inner-marginal, on or close to inner-margin.
Internally, inwardly, on the side nearer *Thorax*.
Interrupted, separated or broken through abruptly.
Iridescent, reflecting the prismatic or rainbow colours.
Irrorated, speckled, sprinkled with minute dots or atoms.
Labial Palpi, small jointed organs attached to *labium*.—Vide Plate I.
Labium, under lip.
Labrum, upper lip.
Larva, caterpillar—the first state of the insect.
Lateral, on or belonging to the sides.
Longitudinal, lengthwise—from head to tail of body, or from base to hind-margin of wing.
Lunular, *lunulate*, crescent-shaped.
Lunule, a curved marking, a crescent.
Macular, composed of spots.
Mandibles, upper pair of jaws.
Marginal, on or near edges of wings.
Maxillæ, lower pair of jaws.
Maxillary palpi, minute jointed organs attached to *maxillæ*.
Median, on or near middle of wing.
Mesothorax, second or middle ring of Thorax.
Metamorphosis, change of form.
Metathorax, third or last ring of Thorax.
Middle, or *middle of wing*, a transverse line equally distant from base and hind-margin. *Before middle*, between middle and base; *beyond middle*, between middle and hind-margin.
Nervules, branches of *nervures*, or small *nervures*.—Vide Plate I.
Nervures, the main, vein-like ribs supporting and extending the wing.—Vide Plate I.
Oblique, slanting, between longitudinal and transverse.
Obliiterate, almost effaced, very faintly marked.

Obsolete, wholly wanting, or scarcely discoverable.

Obtuse, blunt at extremity.

Ocellated spot, vide "Ocellus."

Ocellus, an eye-like spot or marking. (Also used to designate the simple or non-compound eyes situate on the forehead of some insects.)

Ochreous, the colour of ochre, a mixture of yellow and brown.

Olivaceous, the colour of olives, a mixture of green and brown.

Ovate, egg-shaped.

Palpi, small jointed organs attached to head.—*Vide* "Labial palpi" and Plate I.

Patagia, minute appendages of the *pro-thorax*.—*Vide* Introduction.

Patch, a large blotch.

Pilose, clothed with short, fine hair or down.

Proboscis, vide "Haustellum."

Process, an abrupt projection of considerable length.

Produced, elongated, lengthened outwardly.

Production, an elongation.—*Vide* "Process."

Pro-legs, the temporary, fleshy legs of Caterpillars.—*Vide* Introduction.

Prothorax, first or front ring of *Thorax*.

Pterygodes, shoulder-pieces, covering bases of fore-wings.—*Vide* Introduction.

Pubescent, finely hairy.

Pupa, the second state of an insect, the *chrysalis*.—*Vide* Introduction.

Pupillate, containing a central dot or pupil.

Quadrate, square.

Recurved, bent or curved backwards.

Retractile, capable of being withdrawn or contracted after exertion.

Scutellum, a small triangular portion of *meso-thorax*.—*Vide* Introduction.

Segments, the great rings composing the body.—*Vide* "Annulations" and Plate I.

Series, a row or line.

Shot, glossed with a surface-colour visible in certain lights.

Sinuate, waved.

Spatulate, roundly-widened at extremity.

Species, a distinct kind or sort of animal, comprising individuals presumed to have descended from the same original parents.

Spinneret, a small perforated organ through which the Caterpillar emits its silk.—*Vide* Introduction.

Spiracles, breathing-pores.—*Vide* Introduction.

Sternum, the breast or lower portion of *Thorax*.

Streak, a thin stripe of varying width.

Stria, vide "Streak."

Striated, marked with striæ, streaked.

Sub-, in composition with other words, indicates that the term must be considered in a modified sense—it is equivalent to *rather*; thus, *sub-lunular*, *sub-ovate*, mean *rather* or somewhat *lunular* or *egg-shaped*.

Subcostal, a little below *costa*.

Submedian, below the *longitudinal middle line* of wing.

Suffused, clouded or obscured, tinged.

Synonyms, different names given to the same species.

Tail, a long projection on hind-margin of hind-wing. (Also a designation of the anal extremity of the body.)—*Vide* Plate I.

Tarsus, the fifth joint of leg, the foot.—*Vide* Plate I.

Tegulæ, vide "Pterygodes."

Thoracic, on or appertaining to *Thorax*.

Thorax, the second or middle division of body, the trunk.—*Vide* Plate I.

Tibia, the fourth joint of the leg, the shin or shank.—*Vide* Plate I.

Tracheæ, air vessels or tubes.—*Vide* Introduction.

Transverse, across, from side to side of body, or from costa to inner-margin of wing.

Trochanter, the second joint of leg, a minute piece between *coxa* and *femur*.

Truncate, as if cut off at extremity, terminating abruptly in a transverse line.

Tubercles, wart-like projections.

Under-side, surface exposed when the Butterfly's wings are *closed*.

Undulate, wavy.—*Vide* "Sinate."

Unicolorous, of one colour only.

Upper-side, surface exposed when the Butterfly's wings are *expanded*.

Variety, a distinct form of a species, comprising individuals differing in a greater or less degree from the ordinary appearance of their kind.

Vertical, perpendicular.—*Vide* "Transverse."

Violaceous, inclining to the colour of violet, pale-violet.

♂ signifies *Male*.

♀ *Female*.

(b), (m), or (e), immediately following any month mentioned, denotes the *beginning*, *middle*, or *end* of that month.

FINIS.



EXPLANATION OF PLATE I.

I. THE BODY.—UNDER-SURFACE.

A. The Head.

a,a, Antennæ. b,b, Eyes. c,c, Palpi. k, Haustellum or Proboscis, coiled up.

B. The Thorax.

d,d, First pair of Legs, on Prothorax; e,e, Second pair of Legs, on Mesothorax; f,f, Third pair of Legs, on Metathorax.

C. The Abdomen.

g,g,g,g,g,g, Segments or Annulations. h, Caudal or Anal Extremity.

II. THE FORE-WING.

a,a, Costal nervure. b, Subcostal nervure: b1, b2, b3, b4, b5, Subcostal nervules. c1, c2, Discoidal nervules; the second appearing to be a fourth Median nervule, and sometimes so considered.* d, Median nervure: d1, d2, d3, Median nervules. e, Submedian nervure. f, Internal nervure.** g1, g2, g3, Disco-cellular nervules.†† h, Interno-median nervule.†

III. THE HIND-WING.

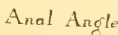
a,a; b, b1, b2; d, d1, d2, d3; e; as in Fore-wing. c, Discoidal nervule (never more than one in this wing). g1, g2, Disco-cellular nervules.†† k, Pre-costal nervure; bifid,—its lower branch united to costal nervure.

* Only thus in the Family *Papilionidæ*.

** Rarely found, except in the *Papilionidæ*.

† Only in the Families *Papilionidæ* and *Morphidæ*.

†† Except in the Family *Papilionidæ*, there are only two disco-cellular nervules in the Fore-wing, the first discoidal nervule being united to the sub-costal nervure. In the Hind-wing there can never be more than two disco-cellular nervules. When these nervules are wanting, the discoidal cell is said to be *open*.



(MAGNIFIED)

Sculp

A female specimen, taken at Knysna, in my collection, differs from the above description; having the *under-side* dull-ochreous, strongly tinged with *olive-green*; the waved lines and transverse streak very distinct, and steely-bluish; the silvery gloss more brilliant; and the ocelli in *hind-wing* with their upper edges strongly marked with dark-brown, four very indistinct ocelliform markings completing a transverse row, parallel to hind-margin.

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Not uncommon. Woods and copses.

September (c)—June (b).

The habits of this singularly-hued Butterfly are almost precisely those of *Nymphalis Xiphæres*, Cram.; but it is a "thought" less rapid in its flight, and is much more frequently to be found about bushes, or young sapling trees. Like other species of NYMPHALIDÆ, this insect much affects some particular spot; and having chosen a convenient, projecting twig, will constantly return to it, as a resting-place after the frequent short and rapid excursions that *Varanes* delights to take. The male habitually flies at a much lower elevation than *N. Xiphæres*, except when battling with others of his sex, or in pursuit of a coy female; and, with a tolerably long-handled net, an expert collector will frequently succeed in capturing him. It sometimes happens that the female descends to a low bush, and quietly sits thereon, while the male hovers about her; on such occasions, one or both may be taken without much difficulty. *P. Varanes* is fond of the resinous exudations on the bark of trees, but appears to be more wary while feeding than at other times. I attracted a specimen at Plettenberg Bay, by smearing some honey on the trunk of a large tree in one of the densely-wooded kloofs so common in that part of the Colony. This plan of enticing the NYMPHALIDÆ should be persevered in by those dwelling in wooded districts, as it would most likely procure them specimens of the various known species of *Nymphalis* (ordinarily so difficult of capture), and very possibly lead to the discovery of new species.

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South Africa (Zoolu). Sierra Leone. Ashanti.—Coll. Brit. Mus.

FAMILY 6.—SATYRIDÆ.

SATYRIDÆ (pars), *Swains.*

SATYRIDES, *Boisd.*

SATYRI, *Latr.*

NYMPHALIDÆ (pars), *Westw.*

SATYRITES, *Blanch.*

SATYRIDI, *Steph.*

SATYRITÆ, *Chenu.*

IMAGO.—*Head* rather small : *eyes* often clothed with short hair ; *palpi* usually much flattened laterally, rather long, porrect, ascendant, generally roughly hairy (in *Erebia* to the very tip of the terminal joint) ; *antennæ* generally short and slender, the club very variable in form, being abrupt, rounded and flattened in some Genera, while in others it is very elongate and almost cylindrical. *Thorax* short and slender in the more typical Genera, and never large or robust. *Wings* large and broad, but of weak structure, variable in outline, but rarely angulated, most commonly entire or moderately dentated on hind-margin ; *one or more of the nervures of the fore-wing usually more or less swollen or dilated at the base* ; discoidal cell of both wings closed ; inner-marginal groove formed by *hind-wings* shallow and incomplete, generally leaving uncovered the apical half of abdomen. *Legs* rather short and slender, with the femora usually but slightly pilose ; the first pair very small and imperfect (never so densely hairy as in many *Nymphalidæ*), especially in ♂, where they are often with difficulty discoverable among the hairs of the thorax. *Abdomen* slender, usually not more than two-thirds the length of hind-wings.

LARVA.—Smooth or pubescent, attenuated towards hinder extremity, *which terminates in a bifid fork*. Head more or less bifid, or with two distinct horns.

PUPA.—Not acutely angulated ; head bifid ; *suspended by the tail only*.*

The SATYRIDÆ form a very distinct group of Butterflies, well characterised by their general weakness of structure as compared with the NYMPHALIDÆ, the thorax being small, short, and compressed, while the wings, though broad and

* Certain European species of the Genus *Satyrus* (*S. Circe*, *Semele*, &c.) are, however, known not to suspend themselves after the usual manner, but to form cocoons of silk and earth, like those of many Moths, in which to assume the pupal state.

large in area, are of slender and delicate substance, presenting none of the rigidity of nervures or tenseness of membrane so observable in the last-named Family. The swollen or inflated nervures in the fore-wing also form an excellent general distinctive character, though many Genera do not possess them, and, as will be seen hereafter, they are likewise found in the Family EURYTELIDÆ.

These Butterflies are usually of a darker or lighter shade of brown, varied with spaces of brick-red or ochrey-yellow, and with strongly-marked pupillate black spots in more or less defined rings of a paler hue than the ground-colour. The upper surface of the wings is thus generally remarkably simple in pattern as compared with the majority of the NYMPHALIDÆ, but more variety is often found on the under-side, which in some species is elaborately streaked (usually in the hind-wings), and on which the ocellated spots are commonly more distinct than above.

Rich or glittering colouring is very rare in this Family, though the single or geminate pupils of the ocellated spots are usually more or less silvery. *Satyrus Panda*, Boisd., is conspicuous for this latter ornament, the spots on the under-surface of the hind-wings being brilliantly silver-centred.* A semi-iridescent gloss over the general surface of the wings is, however, not infrequent in this group.

Most of the South African species inhabit open country, some preferring low-lying tracts, others upland plains, and several elevated mountain regions; but a few are forest-lovers, some keeping to the coolest shades, while others delight in sunny "opens."

The whole group are remarkable for a weak and wavering flight, seldom far from the ground, and only sustained for a short distance at a time; but I have noticed that those species which do not possess the basal inflation of the nervures of the fore-wings possess greater powers of flight and a more robust structure generally. Indeed, these latter appear to approach the MORPHIDÆ, a Family not represented in South Africa, which is intermediate between the NYMPHALIDÆ and SATYRIDÆ, and includes a number of the largest and most splendid of known Butterflies.

The SATYRIDÆ being almost exclusively grass-feeders in their caterpillar state, many species are very abundant; for miles in some localities they occur in boundless profusion, every other step rousing a specimen or two from the herbage.

* *Ypthima Illebe*, mihi, is also ornamented in this manner both above and below.

In such regions these sombre Butterflies, often the only conspicuous forms of insect life, with their slow, uncertain flight, impart quite a character of their own to the arid plain or barren table-land.

The sixteen species of this Family known to me as natives of South Africa are included in seven Genera, viz.: *Cyllo* (1), *Gnophodes* (1), *Debis* (1), *Leptoneura* (2), *Erebia* (7), *Ypthima* (2), *Mycalesis* (2). Of these the *Cyllo* and the *Gnophodes* only are above the middle size, both species attaining an expanse of more than three inches.

Genus CYLLO.

Cyllo, Boisd., E. Doubl.

Satyrus (pars), Godt.

Melanitis, Fab., Horsf.

IMAGO.—*Head*: antennæ rather long, slender, with a long, imperceptibly-formed club, but little stouter than rest of organ; *palpi* short, deep, scaly, compressed, erect. *Thorax* pilose, stout for a Satyrian, hairy laterally and posteriorly. *Wings* broad, more or less *angulated*. *Fore-wing* produced at apex, commonly angulated at extremity of second discoidal nervule, beneath which there is an excavation on hind-margin, which is moderately dentate; *costa* strongly arched; *inner-margin* nearly straight. *Hind-wing*: more or less prominently angulated at extremity of first, and with a smaller projection at end of third, median nervule; *inner-margin* widely grooved, all but concealing abdomen. *Legs* of moderate length and thickness, not hairy: *fore-legs* of ♂ very small.

LARVA.—Elongate, thickened in middle. Head rather large, surmounted by two straight horns. Last segment produced into two long, slightly-divergent horns or spikes.

PUPA.—Smooth, cylindrical, thickened about middle; points of head and thorax rather obtuse.

A single species, the well-known and widely-distributed *C. Leda*, inhabits South Africa. It has hitherto only been found in Natal, where it does not seem to be common.

106. *Cyllo Leda*.

Papilio Leda, Linn., *Syst. Nat.*, II, p. 773, n. 150.

„ „ *Dru.*, *Ill. Nat. Hist.*, I, pl. 15, f. 5, 6.

„ „ *Cram.*, *Pap. Exot.*, pl. 196, f. C, D; pl. [292, f. A.

„ „ *Fab.*, *Ent. Syst.*, III, 1, p. 108, n. 333.

Oreas m. Leda, *Hübner, Samml. Exot. Schmett.*, Bd. 1.

Satyrus Leda, *Godt., Enc. Meth.*, IX, p. 478, n. 4.

Cyllo Leda, *Boisd., Faune Ent. de Mad*, &c., p. 58, n. 2.

Melanitis Leda, *Horsf. and Moore, Cat. Lep. II. E. I. C.*
[*Mus.*, p. 222.

Papilio Solandra, *Fab., Syst. Ent.*, p. 500, n. 244.

Papilio Bankia, *Fab., Sys. Ent.*, p. 499, n. 213; *Donov.*;
[*Godt.*; et Auct.

Papilio Ismene, P. Mycena, P. Phedima, P. Arcensia,
[*Cram., Pap. Exot.*, pl. 26, f. A, B; pl. 291, f. F;

[and pl. 292, fs. B and C.

Expands 2 in. 8 lin.—3 in. 1 lin.

Dull-brown; sometimes more or less suffused with fulvous on disc of wings. Fore-wing: near apex, between second discoidal and second median nervules, a large compound black ocellus, outwardly enclosing two conspicuous white pupils, of which the upper is almost always the larger; fulvous varying from a scarcely-perceptible tinge, bordering upper and inner edges of ocellus, to a conspicuous discal patch, commencing close to costa above ocellus, extending much below ocellus, and shading off into discoidal cell and nearly to base. *Hind-wing:* near hind-margin, between discoidal and third median nervules, from one to three ocelli (of which that nearest anal angle is the largest, and often perfect when the others are half-obsolete or wanting), properly black, white-centred, and ringed with faint-ochreous, but often only represented by whitish dots, or all but obsolete; fulvous very indistinct when present, and only forming an ill-defined tinge on disc. *Cilia* inconspicuously varied with whitish. UNDER-SIDE.—*Excessively variable: scarcely two specimens alike.*—Paler than above (sometimes pale-ochreous), always more or less markedly hatched or irrorated with darker short lines or dots: typical markings, a common dark, transverse streak from costa of fore-wing before middle to inner-margin of hind-wing beyond middle, a similar streak confined to fore-wing from costa beyond middle to near anal angle, and a row of bluish-white-pupillate ocelli, ringed with pale yellow, in both wings near hind-margin; often a common dark transverse streak not far from bases. *Fore-wing:* properly five ocelli, of which the fourth (between first and second median nervules) is the largest, and often pretty well marked when the others are obsolete or wanting. *Hind-wing:* properly six ocelli, of which the first (between subcostal nervules) and the fifth (between second and third median nervules) are the largest, and the sixth bipupillate.

The variations of the under-side in this species are so numerous and so finely graduated into each other that it is impossible to fix upon any *variety* properly so termed, *i.e.*, a constant form differing from the type. The ground-colour is tinged with ochre, pinkish-red, dark-brown, or purple-grey; the transverse stripes wanting, indicated by detached dark blotches, or broadly shaded with dark-brown internally (while the ground beyond them is very pale); the ocelli very conspicuous in both or one wing to their full number, half wanting, ill-defined, without rings, without black, very indistinct, or barely traceable as whitish or pale dots. The ocellus of upper-side of fore-wing is sometimes compounded of three black spots. The *outline* of the wings also varies much, especially as regards the *fore-wing*, the hind-margin of which presents every gradation between being almost straight (save for a slight prominency in apical region), and the assumption of an almost falcate form.

LARVA.—*Wholly pale-yellowish green*, with numerous rows of small black dots: a few short hairs generally scattered and extending over horns of head and anal fork. Three longitudinal streaks, slightly darker than ground-colour, on each side.

PUPA.—*Light-green*, paler on wing-covers which are marked with three longitudinal black lines. Attached by the tail only to the stem of some plant.

Larva and Pupa described from the figures on plate VI of Horsfield and Moore's Catalogue.

Boisduval's descriptions in "Faune Ent. de Mad." agree therewith, but he only mentions four longitudinal streaks in the Larva, which, he states, feeds on grasses, like most of the *Satyridæ*.

I find it impossible to admit *Cyllo Bankia* (or *Banksia*) of Fabricius as distinct from *Leda*, though all authors appear hitherto to have so considered it.* The only real difference noted by the founder of the species consists in the nearly obsolete condition of the ocelli of hind-wing,—a character admitted to be most variable in *Leda*, as is proved by the universal acknowledgement of *Solandra*, Fab., as a variety of Linne's species, this insect only differing from *Leda* in the absence of some of these ocelli. The striæ of the under-side, which Fabricius mentions as characteristic of *Bankia*, also exist in *Leda*, Cramer giving them in his fig. (pl. 196). Having arranged under *Leda* and *Bankia* the various *habitats* assigned to them respectively by all the authors to whom I have access, I find their range to be equal in extent, and that they are allowed to co-exist in seven distinct regions, *viz.*: West Africa, Mauritius, Coromandel, Darjeeling, Bengal, Java, and Australia. The four Cramerian species, by most authors referred to *Bankia*, might with equal reason have been held variations of *Leda*, all having been brought from the East Indies, where the latter is known to abound, and none varying more from Fabricius' description of that species

* Boisduval, however ("Faune Ent. de Mad." &c., p. 59), hints at the likelihood of the two species being identical.

than from the characters of *Bankia*. In short, there seems to be no reasonable ground, as regards either structure, marking, or *habitat*, for continuing to make two indistinguishable species out of one so widely spread and so eminently subject to variation. I strongly suspect that the locality, "Nova Hollandia," of Fabricius' type-specimen is the original cause of *Bankia*'s having been so long retained as a distinct species by successive entomological writers.

Damaraland.—Coll. Tri. (J. A. Bell), et Coll. C. J. Andersson.

Natal. Ceylon. Australia.—Coll. S. A. Mus.

Natal. Mauritius. West Africa. Sierra Leone. Ashanti. Congo. North India. Nepaul. Silhet. Ceylon. Moulmein. Celebes. Borneo. Australia (Moreton Bay).—Coll. Brit. Mus.

North India. Darjeeling. Java. Borneo.—Coll. E. I. C. Mus.

"Port Natal. Madagascar. Bourbon. Bengal. China. Java. New Holland."—Boisd.

"Otaheite."—Fab.

"Querimba. Senegambia. Guinea. Manilla."—Hopffer.

"China. Coromandel. Bengal. Batavia."—Drury, Cramer, Godart.

Genus GNOPHODES.

Gnophodes, E. Doubl.

IMAGO.—*Head* rather large, finely hairy: *eyes* very prominent, naked; *antennæ* slender, with a long, very slender, gradually-thickened club; *palpi* rather short, nearly erect. *Thorax* short, rather robust. *Fore-wings* with costa strongly arched; *apex* truncated; *hind-margin* dentate, with a marked projection below apex, emarginate in central portion; *inner-margin* convex in ♂; in the latter sex, between median and submedian nervures, on upper-side, a large, oval tuft of hairs. *Hind-wings* with costa nearly straight; hind-margin scalloped, with a tail-like projection at extremity of first median nervule.*

One species only is found in South Africa. Its size and the peculiar outline of its wings should render it conspicuous, dull-brown as its colouring is.

* These characters, taken from Doubleday and Westwood's "Genera," seem wholly to coincide with those of the Genus *Cyllo*, excepting only the convex inner-margin and tuft of hairs of the forewing of ♂.

107. *Gnophodes* *Parmeno*.

Gnophodes *Parmeno* (*E. Doubl. MS.*), *Doubl., Westw.*,
[*Hewits., Gen. Diurn. Lep.*, pl. 61, f. 2.

Gnophodes *Parmeus*, *Chenu, Enc. d'Hist. Nat.—Pap.*,
[f. 294.

Expands 2 in. 8 lin.—3 in. 2 lin.

Dull ochreous-brown. Fore-wing: on costa, beyond middle, commences an ochreous stripe (in ♀ broad and well-marked), strongly-curved outwardly as far as first median nervule near hind-margin, and thence extending, and narrowing, almost straight to anal angle; between median and submedian nervures, before middle, in ♂, a thick tuft of long silky hairs, of the ground-colour, lying longitudinally. *Hind-wing*: in some specimens a narrow ochreous border along hind-margin, nearly to anal angle; besides tail on first, a short but marked projection at extremity of third median nervule. *UNDER-SIDE*.—*Varied with dark and light reddish-brown, and irrorated with dark-brown*: in each wing, beyond middle, a transverse row of pale, creamy-ochreous spots. *Fore-wing*: position of transverse stripe of upper-side indicated by the apical portion beyond it being paler than rest of wing (especially in ♀, in which it is pale-ochreous); spots of row four, parallel to apical half of hind-margin. *Hind-wing*: a pale-ochreous band the whole length of costa (more conspicuous in ♀), varied with brown irrorations; spots of transverse row six or seven.

The only South African examples I have seen are those from Natal in the British Museum, and one, from the same locality, in Mr. Guttery's collection.

Port Natal. Sierra Leone. Ashanti.—Coll. Brit. Mus.

Genus *DEBIS*.

Debis (*Boisd. MS.*), *Westw.*

IMAGO.—*Head* rather wide: *eyes* large, with a close clothing of short hair; *palpi* long, much flattened laterally, separate but not divergent, beneath with a smooth dense fringe of hair; *antennæ* short, with a very slender and elongate incassation. *Thorax* short, pilose, rather stout. *Fore-wings* often produced in apical region: *costa* strongly arched from base; *apex* rounded; *hind-margin* bluntly dentate; *inner-margin* straight; *nervures* all simple at base. *Hind-wings* with *costa* very prominent at base, but thence very slightly curved; *hind-margin* more or less deeply

escalloped, often with a marked projection or short tail at extremity of first median nervule. *Legs* short, rather stout, not hairy (except first imperfect pair, which are clothed with short soft hairs in both sexes), but beset with very short minute bristles. *Abdomen* slender, little more than half the length of hind-wings.

LARVA.—Elongate, longitudinally striated; head with two vertical horns; tail with two obliquely-projecting points.—(*Chenu.*)

PUPA.—Short, thick; slightly contracted towards abdominal region.—(*Chenu.*)

The Genus *Debis*, to which I have referred the species provisionally placed under *Satyrus* in my paper in Vol. I of the Third Series of the Entomological Society's Transactions, is proper to Eastern Asia, but a single species is found in North America. The South African species has the fore-wing without apical production, and only a slight projection in hind-wing (more marked in ♀).

108. *Debis dendrophilus*.

Satyrus dendrophilus, *Trimen*, *Tr. Ent. Soc., Lond.*, 3rd [Ser., I, p. 399.

Exp. 2 in. 6 lin.—2 in. 10 lin.

Dull-brown. *Fore-wing*: a fulvous-ochreous tinge over basal half and to near anal angle; beyond middle, an irregularly-sinuate transverse row of seven spots, ill-defined externally, from costa to sub-median nervure; the spot on costal edge whitish, the others ochreous, elongated longitudinally, the largest between second and third median nervules; beyond these, a sub-marginal row of five small whitish spots, indistinctly ringed with blackish, from fourth sub-costal to second median nervule; a pale-brown hind-marginal border, divided by a dark-brown line. *Hind-wing*: fulvous-ochreous; hind-marginal border as in fore-wing, but wider, with another dark line separating it from the ground-colour; a sub-marginal row of seven white-pupilled, rounded, black spots, the last of which, above sub-median nervure close to anal angle, is sometimes bipupillate; inner-marginal region pale-brownish. **UNDER-SIDE.**—Paler, with a slight violaceous lustre. *Fore-wing*: markings similar, fainter; a dark, waved streak crossing discoidal cell, which has likewise a faint-ochreous and two faint-whitish transverse markings; row of whitish spots as above, but the second distinctly ringed with black and yellow; apex suffused with faint-brownish. *Hind-wing*: same colour

as apex of fore-wing, with a strong violaceous gloss; four irregular, interrupted, brown striæ crossing basal half; row of ocelli as above, but in pale-yellow rings; two dentate striæ bordering hind-margin, which is paler than rest of wing: a space, inwardly bordering the ocelli, from discoidal nervule to sub-median nervure near anal angle irrorated with fuscous scales.

From a ♀ specimen forwarded to me by the Ven. H. Kitton, it does not appear that the sexes differ in aspect. The second and fourth ocelli on the upper-side of hind-wing are occasionally wanting.

Mr. D'Urban, who discovered this species in British Kaffraria, gave me the following note of capture: "Forest on the hill above Frankfort, March 28th, 1861,—abundant. Pitches frequently on tree-trunks, head downwards." I have since received interesting confirmation of this butterfly's peculiar liking for tree-trunks from Archdeacon Kitton, who observed it in the Perie Bush, a few miles from King William's Town, and from Mr. H. I. Atherstone, of Highlands, near Graham's Town. Mr. Bowker has found *Dendrophilus* not uncommonly in Kaffraria Proper.

Bashee River, Kaffraria (J. H. Bowker).—Coll. Tri. et Coll. S. A. Mus.

Genus LEPTONEURA.

Leptoneura, Wallgr.

Satyrus, Godt. (pars).

IMAGO.—*Head*.—*Antennæ* rather short, with a long, very gradually-formed club; *eyes* pilose; *palpi* straiter, less hairy than in *Erebia* (especially terminal joint). *Thorax* slightly more robust. *Wings* similar in outline, but apex of fore-wing less rounded and hind-wing rather more dentate than in *Erebia*. *Fore-wing*: all the nervures simple at base. *Hind-wing*: discoidal cell shorter.

The unswollen costal nervure of fore-wing, smoother palpi, and hairy eyes, distinguish this Genus from *Erebia*. Wallengren founds it on the single species, *Clytus*, Linn., to which I have added *L. Cassus* of the same author, which is identical in these structural points.

109. *Leptoneura Clytus*.

Papilio Clytus, Linn., *Syst. Nat.*, II, p. 768, n. 114.

„ „ „ *Mus. Ind. Utr. Reg.*, p. 268, n. 87.

„ „ *Cram., Pap. Exot.*, pl. 86, f. C, D.

Papilio Clytus, *Wulsen, Cap. Ins.*, p. 31, n. 30.

„ „ *Fab., Ent. Syst.*, III, 1, p. 214, n. 671.

„ „ *Herbst, Ins.—Schmett.*, VIII, pl. 213, f. [9, 10; and pl. 214, f. 1, 2, 3, 4.

Satyrus Clytus, *Godt., Enc. Meth.*, IX, p. 525, n. 132.

Erebia Clytus, *Doubl., Westw., Hewits., Gen. D. Lep.*

Leptoneura Clytus, *Wlgr., Lep. Rhop. Caffr.*, p. 31.

Var. ? *Dira Mintha*, *Hübner, Zutrage*, f. 851-2 (*Erebia*
[*Mintha*, *Doubl., Westw., Hewits., op cit.*

Exp. 1 in. 11 lin.—3 in.

Brown, with a glistening greenish and reddish surface-light; fore-wing with creamy-yellow, macular, transverse stripes. Fore-wing: on costa beyond middle commences an outwardly-convex, interiorly much-dentated creamy-yellow band, very variable in depth of hue, width, and continuity, properly reaching to submedian nervure, but often shorter and much interrupted by ground-colour; this band is usually joined about first median nervule by a much narrower stripe of the same colour from fourth subcostal nervule near apex, outwardly bordering a large ocellus, which is narrowly edged with darker yellow inwardly; ocellus more distinctly compound than in other South African Satyridæ, elongate, black, with two (rarely three) large blue pupils. *Hind-wing:* near and parallel to hind-margin a row of five black, fulvous-ringed ocelli, unipupillate with blue, of which the fifth is much the smallest and occasionally nearly obsolete. *UNDER-SIDE.*—*Paler: hind-wing much paler, with dark ziczac strise. Fore-wing:* apex greyish-white; yellow stripes much narrowed, the larger seldom reaching below first median nervule, its inner edge thence being indicated by a dentate dark-brown streak,—the outer forming with the inner edging only a ring about ocellus; in discoidal cell, about its centre, two dark transverse streaks, the inner of which is macular and nearly always continued to submedian. *Hind-wing:* transverse strizæ three,—the macular one near base, and the ziczac one crossing cell, both edged *outwardly* with whitish scales,—the ziczac one about middle similarly edged *inwardly*; a dark line closing cell; ocelli in row seven, brown, with white-pupilled black centres, and narrowly ringed with yellow and brown, two first on costa out of line with the rest, the last larger than above, often bipupillate,—all of them bounded by confluent rings of whitish scales. Both above and below, a paler border on hind-margin of both wings, divided longitudinally by a dark line, straight on upper-side, waved near apices on under-side.

Var. A (♂).—*Considerably larger than usual*; bands of fore-wing and rings of ocelli of hind-wing paler, of the former the larger is more irregular; the outer broader, more continuous, commencing on costal edge; hind-marginal border of fore-wing suffused with greyish-white. UNDER-SIDE.—*Hind-wing*: transverse streaks much less dentate, their whitish edging nearly obsolete; sixth and seventh ocelli, and space of wing near them, often dusted with blue scales.

Var. B. (♂).—*Considerably smaller and rather darker than usual*. *Fore-wing*: ocellus very small, occasionally nearly obsolete; outer band entirely wanting; inner band narrow, much separated into spots, touching ocellus, its upper part nearly white, its lower tinged with fulvous. UNDER-SIDE.—Very dark; markings indistinct, but all present, even to streaks in cell and hind-marginal line. *Hind-wing*: streaks as in Var. A, but hardly a vestige of the white scaling over the whole surface: ocelli very indistinct, save for their white centres.

? Var. C (♀).—[? *Mintha*, Hübn.]—Rather small (two inches in expanse), paler; fore-wing flushed with fulvous in centre; inner transverse band also fulvous-tinged, and ocellus tripupillate. UNDER-SIDE.—*Hind-wing*: markings indistinct; *nervures white*.

Of the three varieties here noted, A and B are from Kaffraria, C from some locality not stated. Variety B is certainly the most remarkable, and seems, though far more aberrant from its type-form, to correspond with the small, very dark variety of *L. Cassus* which frequents the low-lying country near Cape Town, but I am not aware whether, as in the latter species, the difference of aspect is attended by a difference of locality. Mr. Bowker, however, notes Variety B as being confined to high hill-ridges in the Bashee River district. In contrast with the finely-developed Variety A, also from Kaffraria, very striking is the apparent distinctness of this dwarfed and darkened race, but a long and careful comparison has convinced me of its being truly *Clytus*. Concerning Variety C (which is in the British Museum, from the collection of Dr. Andrew Smith) I do not feel quite so certain, but I agreed with Mr. Westwood in considering it as *Clytus*, when describing it at the close of 1859.

Very abundant. Fields, hill-sides, and open ground generally.

February (m)—May (e).

The abundance of this species during the three months in which it is out is wonderful, attaining its maximum in March, when grassy spots are quite enlivened by the multitude of glossy dark wings constantly in tremulous motion. The flight of *Clytus*, though low, is capable of considerable extension; when undisturbed, assuming somewhat of a circular direction. But few of the female sex appear among these swarms: I think the proportion of ♂s to ♀s cannot be less than as 50 to 1. I have seen no typical examples from Kaffraria Proper, but Mr. D'Urban found them abundantly in British Kaffraria.

Cape Town. Caledon (J. X. Merriman) and Genadendal (G. Hettarsch). Knysna. Plettenberg Bay. Bashee River, Kaffraria (J. H. Bowker).—Coll. Tri.

Butterworth, Kaffraria (J. H. Bowker).—Coll. S. A. Mus.

Cape of Good Hope. Interior of South Africa.—Coll. Brit. Mus.

"From Graham's Town to Windvogelberg (typical and Var. A)"—W. D'Urban, in litt.

110. *Leptoneura* Cassus.

Papilio Cassus, *Linn., Syst. Nat.*, II, p. 761, n. 125.

" " " *Mus. Lud. Ulr. Reg.*, p. 269, n. 88.

" " *Cram., Pap. Exot.*, pl. 314, f. C, D.

" " *Herbst, Ins.—Schmett.*, VIII, pl. 204, [f. 1, 2.

Satyrus Cassus, *Godt., Enc. Meth.*, IX, p. 526, n. 134.

? *Erebia* Clytus, var. ♀, *Doubl., Westw., Hewits., Gen.* [D. Lep.

Exp. 1 in. 9 lin.—2 in. 6 lin.

Very dark brown, with a purplish gloss: fore-wing widely coloured with deep-fulvous. Fore-wing: fulvous in ♂ much obscured, ferruginous, or almost merged in ground-colour, nearly filling discoidal cell, covering basal halves of median nervules, and extending to the inner edge of a large white-bipupillate, ill-defined black ocellus, near apex,—in ♀ broader, paler, and crossed by a faint disco-cellular streak of brown, and a long, more conspicuous streak from costa beyond middle,—in neither sex extending above subcostal or below submedian nervure. Hind-wing: a row, beyond middle, of 3—5 white-pupilled black ocelli in deep-fulvous rings, between second subcostal nervule and median nervure. UNDER-SIDE.—Paler; costa and apex of fore-wing, and hind-wing wholly, often coloured with greyish-ochreous; fulvous of fore-wing not reaching ocellus, but scarcely reaching beyond outer transverse streak, which, with that in cell, is usually clearly marked in both sexes. Hind-wing: two crenelated dark-brown transverse lines, one before, the other about middle; ocelli very faintly represented by pale dots and incomplete pale rings, seven in number; beyond them, a lunular dark line. In both wings a dark line along, and close to, hind-margin.

In some ♂ specimens, the ocellus of fore-wing is tripupillate, the lowest pupil indicating the existence of a second ocellus; and a ♀ in my collection has, in addition to the large three pupilled ocellus, two well-marked smaller ocelli between first and third median nervules, the

lower being the larger. In one ♀, the fulvous indistinctly extends round outer edge of large ocellus, as in Cramer's figure, and indications of this appear in others.

Local. Mountains and hill-sides, and sandy plains.

October (c), and December.

This dark and peculiar-looking insect approaches more nearly to *Clytus*, Linn., than to any other South African Satyrian. When only acquainted with a few faded ♀ specimens, I felt fully inclined to think, with Mr. Westwood, that *Cassus* might well be an extreme variety of the variable *Clytus*; but since having taken ♂s, and observed the insect for two seasons in its native haunts, I am quite convinced of its being a distinct species. In structure the two species are almost identical, but *Cassus* is rather more robust, and has rather longer antennæ, with more rounded, abruptly-formed, and flatly-shaped clubs. Specimens found on the sandy flats are invariably much smaller and darker than those inhabiting the hills, the markings of some ♂s being all but obliterated, so that the surface is almost unicolorous. The ochreous colouring of the under-side, too, is wanting in the lowland examples, being represented by irregular greyish scaling, conspicuous on the dark ground. *Cassus* is at once distinguished on the wing by its dark hue. I have not noticed it before the end of October, or after the middle of December, while *Clytus* does not appear before the middle of February, and remains out till the middle or end of May. Among the great number of examples of *Clytus* that I have examined, I have never noticed one with more than a single ocellus in fore-wing. *Cassus* seems confined to the Western Province of the Colony.

Cape Town. Stellenbosch.—Coll. Tri. et Coll. S. A. Mus.

Cape of Good Hope.—Coll. Brit. Mus.

Genus EREBIA.

Erebia, Dalman, Boisd.

Satyrus (pars), Boisd.

Pseudonympha and *Physcæneura*, Wallgr.

IMAGO.—*Head*: eyes smooth; palpi long, densely hairy, slightly ascendant; antennæ short, with an usually rather gradually-formed, but in *E. Hippia* and *Sabacus* abrupt, club. *Fore-wing*: costa moderately arched; apex rounded; hind-margin entire, nearly straight; costal nervure often swollen at base. *Hind-wing*: inner-margins touching naturally for nearly half their length, forming a very shallow, imperfect groove, and thence rather markedly divergent; hind-margin entire, or very slightly dentate.

The typical group of *Erebia* is very numerously represented in Europe, the number of species being greater than in any other European genus, with the exception of *Lycæna* (*Polyommatus*). Nearly all of these insects are found exclusively in mountainous districts.

The seven South African species of this genus all have the costal nervure of fore-wing markedly enlarged at base, but

none of the other nervures show any enlargement. I cannot follow Wallengren in separating these insects from the Genus *Erebia*, as they only seem to differ by exhibiting as a constant character the enlarged costal nervure (which in the European group is as often simple as swollen). Still less can I agree with him in considering the species *Panda* of Boisduval as the type of a new genus (*Physcæneura*), the only distinctions from *Pseudonympha* pointed out in his own detailed diagnosis being the slightly inferior origin of the first discoidal nervule ("Costa 6"), and the less-marked angulation of the disco-cellular nervule ("costula transversa cellulæ"). The more slender club of the antennæ is not a character of consequence, *E. Cassius* and others of the genus also presenting it.

These insects are usually of a sombre hue; the most lively-looking being *E. Panda* and *Cassius*, especially the former. The commonest are *E. Sabacus*, *Cassius*, and *Hippia*; to which may be added, near Cape Town, *E. Hyperbius*. The other three can scarcely be expected to occur further South and West than British Kaffraria.

111. *Erebia Hyperbius*.

Papilio Hyperbius, *Linn., Syst. Nat.*, II, p. 769, n. 130.

" " " *Mus. Lud. Ulr. Reg.*, p. 257,
[n. 76.

" " *Fab., Syst. Ent.*, p. 485, n. 189.

" " ♀, *Cram., Pap. Exot.*, pl. 168, f. E, F.

" " *Wulfen, Cap. Ins.*, p. 32, n. 31.

" " *Herbst, Ins.—Schmett.*, VIII, pl. 203,
[f. 7, 8.

Satyrus Hyperbius, *Godt., Enc. Meth.*, IX, p. 527, n. 135.

Pseudonympha Hyperbius, *Wallgr., Lep. Rhop. Caffr.*,
[p. 32, n. 3.

Exp. 1 in. 6. lin.—1 in. 9 lin.

Dark-brown, with a violaceous gloss: fore-wing much coloured with deep-fulvous, hind-wing with a small fulvous patch. Fore-wing: fulvous occupies the same space as in E. Sabacus, but is not externally dark-edged, nor ever divided into two patches, though its cellular portion is often much obscured in ♂; an apical ocellus, white-bipupillate, and ringed indistinctly with pale ochreous, marks upper portion of fulvous, quite as in Sabacus. Hind-wing: on median nervules an ill-defined fulvous patch, enclosing two small unipupillate ocelli (one or both often wanting). Both wings, but especially hind-wing, clothed with fulvous hairs

on basal half. **UNDER-SIDE.**—*Hind-wing*, and *costa*, *apex*, and *hind-margin of fore-wing*, *irrorated with whitish atoms*. *Fore-wing*: fulvous paler, more regularly extending from base in ♂; from its outer edge, beyond ocellus, extends to costa a narrow ferruginous streak, sometimes almost obsolete; ring of ocellus more distinct. *Hind-wing*: beyond middle two parallel, rather widely-apart, usually indistinct, ferruginous, transverse lines, parallel to hind-margin, between which is a row of inconspicuous whitish dots, two of them representing the ocelli of upper-side.

This species, except for its much darker colour, has considerable resemblance above to *E. Sabacus*, mihi, but the *fulvous* coating of hairs (which is much denser than in any other South African *Erebia*) is a character peculiar to *Hyperbius*. Beneath, however, the two species are very different, the under-side of *Hyperbius* being more like that of *Hippia*, Cram., though much darker and differently marked. Cramer's figures, above quoted, give a good idea of this insect, but he gives quite a distinct species, *E. Cassius* of Godart, as its ♂.

The ferruginous lines and intermediate white dots of the under-side of hind-wing evidently represent a fascia and row of ocelli—the type pattern of the group.

Rocky mountain-sides, elevated stony roads, and similarly high-lying localities. Common.

July (c)—September (m).

This butterfly, which in aspect and habits more nearly than its compatriot congeners approaches the European *Erebie*, is common near Cape Town, but only during the short period in the spring above noted. It delights to settle on large stones; and I have once or twice seen it on a flower. It must prefer *mountainous* regions, though not confined to any particular altitude, as I never saw it in the hilly Knysna district. Mr. Bowker has collected no Kaffrarian specimens, nor did Mr. D'Urban meet with the species in British Kaffraria. Wahlberg, however, found *Hyperbius* in some parts of the South-Eastern region, so that the insect no doubt inhabits the mountain ranges of the country generally.

Mr. A. White Laving looked up the history of the specimen labelled "Afghanistan" in the British Museum, it appeared that it was procured from a collector named Warwick, and formed part of a collection made by Captain Boyd in the country in question.

Cape Town. Stellenbosch.—Coll. Tri.

"Kaffraria (Wahlberg)."—Wallgr.

Afghanistan (!).—Coll. Brit. Mus.

112. *Erebia* *Narycia*.

♂. *Pseudonympha* *Narycia*, Wallgr., *Lep. Rhop. Caffr.*,
[p. 32, n. 4.]

Exp. 1 in. 9 lin.—1 in. 11 lin.

Dull-brown. *Fore-wing*: a large sub-quadrate fulvous patch on disc, commencing immediately beyond discoidal cell, leaving a broad border of ground-colour bounding it on

each margin of wing, and half-enclosing in its upper exterior portion, a black, white-bipupillate ocellus in a paler-fulvous ring. *Hind-wing*: beyond middle, between first and third median nervules, two similar (but unipupillate) ocelli, which are more conspicuous in ♀, and of which the superior one is the larger. *UNDER-SIDE*.—Slightly paler; markings very distinct. *Fore-wing*: fulvous defined inwardly and outwardly by a line darker than ground-colour, the outer line dentate in ♂; iris of ocellus ochreous, ringed with dark-brown. *Hind-wing*: *costa at base tinged with fulvous* (in ♀ some indistinct fulvous tinting along inner-margin); beyond middle a most indistinct fascia, slightly paler than ground-colour, containing four ocelli like that in fore-wing, of which the two wanting on upper-side are respectively between first and second subcostal nervules, and third median nervule and submedian nervule, the latter being bipupillate.

Wallengren's description gives the hind-wing as wanting ocelli above, and being marked with five ocelli beneath; but this does not make me hesitate to refer the specimens above described to his *Narycia*, as a ♂ taken by Mr. D'Urban has the ocelli nearly obsolete above, and as Wallengren states the second and third of the five ocelli beneath to be "minutissimi," so that one or both may occasionally be obsolete altogether. The basal tinge of red on underside of hind-wing is a good distinctive character of this species. In some ♂ specimens taken by Mr. D'Urban, however, this character is barely traceable: the pale fascia is more distinctly marked; and the ocelli smaller than usual, the last being unipupillate, like the rest.

This species seems to be far less common than most of the other South African *Erebia*, but probably its rarity is more apparent than real; the nearly allied insects of this genus being very liable to be overlooked by collectors as identical with those everywhere to be met with.

King William's Town, and Keiskamma, near Bodiam.—Coll. D'Urban.

Bashee River, Kaffraria (J. H. Bowker).—Coll. mihi, and Coll. S. A. Mus.

113. *Erebia Hippias*.

Papilio Hippias, *Cram.*, *Pap. Exot.*, pl. 222, f. C, D.

„ *Hippius*, *Herbst*, *Inst.*—*Schmett.*, VIII, pl. 204,
[f. 5, 6.

Satyrus Cassius, ♀, *Godt.*, *Enc. Meth.*, IX, p. 526, n. 134.

Pseudonympha Hippias, *Wallgr.*, *Lep. Rhop. Caffr.*, p. 32,
[n. 1.

Exp. 1 in. 7 lin.—2 in.

Pale greyish-brown, with a fulvous patch in both wings.
Fore-wing: fulvous patch rotundate, filling outer third of discoidal cell, and covering basal half of median nervules;

nearly touching its upper external edge, a large black ocellus, bipupillate with bluish-white, in an ochreous-grey ring. *Hind-wing*: fulvous patch beyond middle, on median nervules, often not well defined, somewhat rounded, not infringing on cell. *UNDER-SIDE*.—*Costa and apex of fore-wing, and whole of hind-wing, pale brownish-grey, closely but rather indistinctly hatched with short brown lines. Fore-wing*: fulvous extends uninterruptedly to base, leaving inner-marginal portion of the ground-colour: iris of ocellus clearer, ringed outwardly with brown. *Hind-wing*: brown hatching prevailing mostly along costa, and especially in apical region as far as first median nervule (giving a clouded appearance to that part of wing); in one specimen a minute, but quite distinct, ocellus like that in fore-wing, but unipupillate.

Before seeing the examples just described, I had, with considerable doubt, referred to Cramer's *Hippia*, the species next described, *E. Sabacus*, mihi, which also has the hind-wing clouded-grey beneath. The chief distinguishing characters of *Hippia* are its pale ground-colour, the unusually large ocellus of fore-wing, which is closer to costa and apex than in other species, and the abruptly ovate-clubbed antennæ. My specimens differ from Cramer's figure on the upper-side by a much smaller field of red in fore-wing, and the want of the minute ocellus in hind-wing; and on the under-side by the absence of the minute ocelli, except in the single instance above noted. All these characters are, however, present (excepting that the fulvous of fore-wing above does not reach base) in a ♂ example from King William's Town, but the costal ocellus on hind-wing beneath is much larger and more distinct.* Wallengren notes a ♀ variety in Wahlberg's collection having the wings concolorous above, though with the ordinary fulvous on under-side of fore-wing.

Broken, rocky ground, on mountain slopes. Not uncommon, but often difficult to capture, from its very wavering, uncertain, though not rapid flight among large stones and bushes. Often settles on stones or on the ground.

March (e)—April (e). August. "October."—D'Urban, in litt.

Cape Town. Genadendal (Caledon Divn.).—Coll. Tri.

Graham's Town and King William's Town.—Coll. D'Urban.

114. *Erebia Sabacus*. N. Sp.

Erebia Sabacus, mihi.

Exp. 1 in. 3 lin.—1 in. 8 lin.

Greyish-brown, darker than in Hippia, but not so dark as Hyperbius, Linn. Fore-wing: a deep-fulvous patch occupies, and sometimes extends a little below, discoidal cell, and is usually confluent at insertion of median nervules with a larger patch of the same colour, lying between fifth subcostal

* The apical ocellus of fore-wing in this specimen is much smaller than usual.

and third median nervules, and defined, partly internally and wholly externally, with a line of dark-brown, the external line commencing on costa and slightly inclining inwards as far as third median nervule: black apical ocellus touching outer fulvous, ovate, bipupillate with bluish, and with an incomplete, indistinct, yellowish-grey ring. *Hind-wing*: an indistinct dark-brown line near and parallel to hind-margin; touching its inner edge, between first and third median nervules, a small fulvous patch, enclosing two small, black, white-unipupillate ocelli, very variable in size, and all but obsolete in some examples. *UNDER-SIDE*.—*Costa and apical region of fore-wing* indistinctly, *whole of hind-wing* conspicuously, *whitish-grey*, hatched with short dark-brown lines. *Forewing*: fulvous paler, the two patches more completely confluent, but the inner brown edging of the outer patch often well-marked; ring of ocellus more distinct and complete. *Hind-wing*: three irregular, transverse, brown streaks,—one crossing cell between middle and base, occasionally rather indistinct,—one median, much zigzagged, always strongly marked,—the third regularly dentate, near hind-margin, sometimes a good deal obscured by the brown hatching, which is densest along hind-margin; between median and outer streak (but nearer the latter) three ocelli, usually with suffused brownish clouding, two answering to those on upper-side, the third between two subcostal nervules; the latter ocellus often, and all three occasionally, quite wanting.

This species differs chiefly from *E. Hippiæ*, Cram., in its double fulvous patch, much smaller, incompletely-ringed ocellus, and dark-brown line of fore-wing, and much smaller fulvous marking of hind-wing; and beneath, in its triple-streaked, whiter hind-wing. The antennæ have a more slender, gradually-formed club, and are much more conspicuously white-ringed, especially beneath. The ♀s I have seen are all smaller than the ♂s.

Var. A.—Much darker: the fulvous patches in fore-wing much smaller, separated by a wide space of ground-colour, brown edging of outer one conspicuous. *UNDER-SIDE*.—*Nervures* at apex of fore-wing and throughout hind-wing *strikingly white*: ground-colour ochreous-brown, very finely irrorated with darker atoms. *Fore-wing*: fulvous as usual. *Hind-wing*: three streaks dark and well defined, the median one more sinuate than angulated; space between median and outer streaks of the ordinary whitish-grey, with three additional ocelli, making a row of six. (These extra ocelli are marked on upper-side by minute white dots.)

This beautiful variety was taken near Cape Town by Mr. T. W. Palin, and is so strikingly marked that any one would take it at first sight to be a

distinct species. But a comparison of it with a very extensive series of *Sabacus* has convinced me of its identity with that species. For three successive seasons I have searched the locality where it was captured, without ever meeting with a second example.*

Very common. Grassy spots on hill-sides, fields, sandy plains, &c.

September (m)—May (m).

E. Sabacus appears in extreme abundance on the Cape Flats in October and November, every step rousing two or three specimens. It was equally plentiful in the Knysna marshes during the summer. It is very easily taken, having a short, weak flight. Its abundance in British Kaffraria and Kaffraria Proper has also been noted by Messrs. D'Urban and Bowker.

Cape Town. Mossel Bay. Knysna. Plettenberg Bay. Graham's Town (H. I. Atherstone).—Coll. Tri.

Butterworth and Bashee River, Kaffraria (J. H. Bowker).—Coll. S. A. Mus.

"From Graham's Town to Windvogelberg."—W. D'Urban, in litt.

Interior of South Africa.—Coll. Brit. Mus.

115. *Erebia* Cassius.

Satyrus Cassius, *Godt., Enc. Meth.*, IX, p. 526, n. 134.

Papilio Hyperbius, ♂, *Cram., Pap. Exot.*, pl. 168, f. C, D.

" " *Herbst, Ins.—Schmett.*, VIII, pl. [203, f. 5, 6.

Pseudonympha Hyperbioides, *Wallengr., Lep. Rhop. Caffr.*, [p. 20.

Expands 1 in. 3 lin.—1 in. 6 lin.

Grey-brown. Fore-wing: a brick-red, ill-defined central patch on median nervure and nervules, and occupying outer portion of discoidal cell; beyond it, two transverse streaks darker than ground-colour,—the first not extending below red patch,—the other, which is close to hind-margin, extending from apex to anal angle; between the two streaks, near costa, a large, nearly circular, black ocellus, yellow-ringed and bipupillate with blue. *Hind-wing*: two transverse streaks as in fore-wing; two small ocelli near hind-margin towards anal angle, coloured as in fore-wing, but unipupillate, —the ocellus nearer anal angle smaller than the other. *UNDER-SIDE*.—Paler: hind-margin near *apex of fore-wing*, and *whole of hind-wing*, more or less closely *hatched with numerous short, thin, red-brown lines*. *Fore-wing*: brick-red

* Specimens since forwarded from Kaffraria and Graham's Town approach this variety, possessing the white nervures, though not the accompanying peculiarities. All these examples have the ocelli in hind-wing unusually large and black, and, in one instance, the *ocelli* of hind-wing, as well as the large ocellus of fore-wing, *possess no pupils*.

patch larger, almost filling discoidal cell; ocellus and transverse streaks more distinctly marked. *Hind-wing*: two angulated, transverse, reddish-brown streaks, one before, the other about middle; hind-margin densely hatched with red-brown lines; only the smaller ocellus visible near anal angle, and that very minute; another small ocellus just above subcostal nervule, close to apex: in some specimens, the whole hind-wing is so densely hatched that the two transverse streaks are inconspicuous.

A ♂ specimen in my collection has in both fore-wings a minute ocellus adjoining the lower extremity of the ordinary large ocellus; and there is an additional ocellus in the hind-wings, smaller and more towards costa than the two ordinary ones.

In a ♀ example, the small ocellus on under-side of hind-wing, near apex, is also distinct on the upper surface of the wing.

Bushy and grassy spots, woods, gardens, &c. Very common.

August (e)—May (e).

This pretty and distinctly-marked species is widely distributed in South Africa, and seems to be as common in the well-wooded districts of the East as in the dry and shrubby Western regions. Its flight is very low and weak, and it is most easily captured. The collector cannot fail to meet with it during his first season.

Cape Town. Knysna. Plettenberg Bay. Port Elizabeth (W. D'Urban).—Coll. Tri.

Butterworth, Kaffraria.—Coll. J. H. Bowker.

Cape of Good Hope. Interior of South Africa. Delagoa Bay.—Coll. Brit. Mus.

"Graham's Town to Frankfort, British Kaffraria."—D'Urb., in litt.

116. *Erebia Natalii*.

Satyrus Natalii, *Boisd., App. Voy. de Deleg.*, p. 594, n. 84.

Expands 1 in. 6 lin.

"*All the wings brown, each having towards the hind-margin a rather large fulvous patch, containing on the fore-wings a black ocellus, with two white pupils and a yellowish-fulvous iris, and on the hind-wings two or three minute ocelli of similar colouring. UNDER-SIDE of fore-wings like the upper-side: that of hind-wings brown, with two parallel, transverse, sinuated, ferruginous streaks, succeeded by an almost marginal row of four black ocelli, pupilled with white and circled with fulvous, of which that at anal angle is a little smaller than the rest. Beyond the ocelli, parallel with the cilia, are also two thin streaks, darker than the ground-colour. We are only acquainted with the ♀.*"

This description is a translation of that given by Boisduval in the Appendix to Delegorgue's Travels. Mr. John A. Bell's collection of butterflies from Tropical South-Western Africa contained a single, much-worn example of this species.

"Amazoulu Country."—Boisd. in Deleg.
Damaraland (J. A. Bell).—Coll. Tri.

117. *Erebia Panda*.

Satyrus Panda, Boisd., *App. Voy. de Deleg.*, p. 594, n. 85.
Erebia Panda, Hpf., *Peters' Reise nach Mosamb.*, Ins.,
[pl. 25, f. 1, 2.

Expands 1 in. 6 lin.

Dull-brown: each wing with a transverse row of ochrey-red, black-centred spots. Fore-wing: base of dilated subcostal nervure tinged with ochrey-red; near and parallel to hind-margin the five *connected spots* of the transverse row *form rather a broad band. Hind-wing:* six spots in transverse row near hind-margin, all separate but the two next anal angle, which form a single, bipupillate marking; a whitish line on hind-margin, near anal angle. UNDER-SIDE.—Very different: *transversely and irregularly streaked with alternate pale-yellowish and dark-brown slender lines, in many places confluent; rows of spots situated as on upper-side, but ochrey-yellow, with conspicuous silvery centres. Fore-wing:* dilation of subcostal nervure ochrey-yellow; transverse yellowish lines not extending beyond median nervure and third median nervule, below which the wing is wholly dark-brown; beyond row of spots the dark lines become fewer, thinner, and shorter, the hind-margin itself being wholly yellowish; parallel to hind-margin two dark-brown streaks, one festooned just beyond spots, the other straight and immediately within margin. *Hind-wing:* the transverse streaking extends to inner-marginal edge; an additional spot, like those in row, beyond middle, between first and second subcostal nervules; two spots of row next anal angle not so closely confluent as on upper-side; streaks along hind-margin as in fore-wing.

Described from a single specimen taken by Mr. C. J. Andersson in Tropical South-Western Africa. One of the most elegant butterflies of the Family, and rare in collections.

"Amazoulu Country."—Boisd. in Deleg.
Damaraland.—Coll. C. J. Andersson.
"Inhambane."—Hopffer, in Peters' Reise.

Genus YPHTHIMA.

Yphthima, *Hübner*, *E. Doubl.*

IMAGO.—Allied to *Erebia*.—*Head*: *palpi* thinner, less hairy; *antennæ* slender, very gradually and thinly incrassate. *Thorax* smaller, smoother. *Fore-wings* more elongate: *hind-margin* much more convex, entire; costal nervure strongly swollen at base (“median vein slightly swollen”—*Gen. D. Lep.*). *Hind-wing*: more rounded, especially at anal angle; *hind-margin* entire. *Legs* more slender, smoother. *Abdomen* longer and thinner.

The single South African representative of this genus that I have seen is a much more delicate, slenderly-made insect than the nearly-allied *Erebiæ*. The other species, *Y. Cymela*, is only given on the authority of Cramer. The genus is as widely-spread as *Mycalesis*, but apparently even poorer in species.

118. Yphthima Hebe.

Yphthima Hebe, *Trimen*, *Trans. Ent. Soc., Lond.*, 3rd [Ser., I, p. 280.

Exp. 1 in. 4 lin.—1 in. 8 lin.

Ochreous-brown. *Fore-wing*: two silvery-centred, black ocelli in orange rings near hind-margin towards apex; before them, a brown transverse streak; beyond them, two submarginal, parallel, linear brown streaks. *Hind-wing*: a row of five similar, smaller ocelli (three next costa minute), parallel to hind-margin; submarginal streaks as in fore-wing. UNDER-SIDE.—Pale-yellowish, with red-ochreous striæ. *Fore-wing*: swelling of costal nervure at base margined with red-ochreous; three transverse striæ, the outermost bifid at summit, and reaching from subcostal nervure to inner-margin; ocelli as above, but in additional outer rings of red; submarginal streaks as above. *Hind-wing*: three transverse striæ; two other short striæ in discoidal cell; a row of six ocelli, parallel to hind-margin (the first largest), like those in fore-wing; submarginal streaks as in fore-wing.

Specimens since received from Mr. J. H. Bowker vary from the above description* in possessing the red streaks of fore-wing conspicuously on *upper-side*; the ocelli, also, being ringed with bright yellow. The red, too, is much brighter,—the colour of red-lead. In one example, indeed (in

* Made from a single specimen in the British Museum.

which the second and third striæ of fore-wing are confluent on median nervure), the red striæ are present on the *upper-side of both wings*.

"Habits the same as those of the common species of *Satyridæ*: very rare."—J. H. Bowker, in litt.

Bashee River, Kaffraria (J. H. Bowker).—Coll. Tri.
Port Natal.—Coll. Brit. Mus.

† 119. *Ypthima Cymela*.

Papilio, Cymela, Cram., Pap. Exot., pl. 132, f. C, D.

Pale-brown, with black, yellow-ringed ocelli, and two common dark-brown streaks parallel to hind-margins, which are also edged with dark-brown. Fore-wing: two ocelli, both bipupillate, near submarginal streaks, one between two discoidal, the other between second and third median, nervules. Hind-wing: three ocelli, of which the first (near costa) is small and unipupillate, the second (between second and third medians) largest and bipupillate, the third (near anal angle) minute, its pupil obsolete. UNDER-SIDE.—Paler; with two regular, common, transverse reddish-brown streaks, commencing one before, the other beyond, middle on costa of fore-wing, and extending, with a slightly-convergent tendency to inner-margin of hind-wing; rings of ocelli paler, broader, encircled with reddish-brown; submarginal lines reddish-brown. Fore-wing: lower ocellus with two small, contiguous, pale-yellow spots adjoining its upper edge. Hind-wing: first ocellus large, bipupillate, with a minute contiguous ocellus on either side,—second ocellus with two contiguous spots precisely like the lower ocellus of fore-wing,—third ocellus unipupillate: ground-colour beyond outer transverse streak wholly very pale reddish-ochreous.

This description is made from Cramer's figures, in default of specimens of the insect.

Cape of Good Hope.—Cramer.

Genus MYCALESIS.

Mycalesis, Hübn., E. Doubl.

IMAGO.—*Head* rather wide: *eyes* smooth; *palpi* thin, acute, finely and smoothly hairy beneath, more ascendant and shorter than in *Erebia*; *antennæ* stouter, in ♂ longer, much more gradually and cylindrically incrassate. *Fore-wing: costa* more convex; *apex* more acute; *hind-margin* dentate; *costal, median, and submedian nervures* very strongly swollen

at base; inner-margin in ♂ slightly convex. *Hind-wing*: an excavation, followed by a marked prominence, on costa at base; hind-margin markedly dentate; in ♂, close to base, a tuft of long hairs springing from edge of subcostal nervure; inner-marginal groove very imperfect. *Abdomen* rather long, in ♂ hairy at extremity.

Of this genus, which (though poor in species) is distributed throughout the warm regions of the globe, two species are recorded from Southern Africa. These are very dissimilar in size and colouring, and both appear to be peculiarly African. *Mycalesis* is readily recognisable by the collector, being the only South African genus in which *three* of the nervures of fore-wing are basally enlarged.

120. *Mycalesis Evenus*.

Mycalesis Evenus, *Hpfr.*, *Peters' Reise nach Mosamb.*,
[*Ins.*, p. 394, pl. 25, f. 5, 6.

Mycalesis Gambius, *E. Doubl.*, *List Lep. Brit. Mus.*,
[p. 139.

Var. ♂.—*Mycalesis Eusirus*, *Hpfr.*, *op cit.*, p. 393, pl.
[25, f. 3, 4.

Mycalesis injusta, *Wlgr.*, *Lep. Rhop. Caffr.*, p. 33, n. 1.

Var. ♀.—*Mycalesis Caffra*, *Wlgr.*, *op cit.*, p. 34, n. 2.

Exp. 1 in. 8 lin.—2 in.

♂. *Brown*, with an ochreous tinge: two ocelli in fore-wing beyond middle. *Fore-wing*: beyond cell, an indistinct, rather suffused, ochreous transverse streak, between subcostal nervure and first median nervule; between ocelli (which are situated respectively between two discoidal and second and third median nervules, white-centred, and ringed with ochreous) an indistinct ochreous suffusion; rarely a very minute, third ocellus, immediately below upper one. *Hind-wing*: usually unmarked; occasionally a small blackish spot between second and third median nervules; a smooth glistening space on costa, wider near base, and on its edge, springing from subcostal nervure close to base, a tuft of long whitish hairs. In both wings, a dark line running parallel and close to hind-margin. *UNDER-SIDE*.—With a violaceous gloss. *Basal halves of wings dark-brown*, abruptly separated from ochreous-brown outer halves by a pale-ochreous, rather sinuate streak, from costa of fore-wing to inner-margin (near anal angle) of hind-wing. *Fore-wing*: a distinct pale streak with dark edges across middle of discoidal cell; before it, a similar streak, very little paler than ground-colour; ocelli distinct,

with paler rings, but upper one minute and occasionally represented by a white dot; lower ocellus large, externally ringed with dark-brown and with a wide violaceous halo bounded with brown. *Hind-wing*: a row of seven small ocelli beyond middle, of which the fifth and sixth are largest, and the first, second, and third minute and sometimes almost obsolete. In both wings, besides hind-marginal line of upper-side, an inner, much angulated brown line, widening on fore-wing to half-encircle larger ocellus.

♀. Paler; without tuft on hind-wing. *Fore-wing*: besides the third ocellus sometimes seen in ♂, there is occasionally a fourth just above large ocellus. *Hind-wing*: a small ocellus rarely present between second and third median nervules. UNDER-SIDE.—*More of one colour*, especially in hind-wing, paler, more ochreous; sometimes much clouded with violaceous scales. *Fore-wing*: inner cellular streak not so indistinct. *Hind-wing*: a dark, curved, transverse line near base; median transverse streak only represented by its dark inner edge.

Var. ♂ (*Eusirus*, *Hpfr.*). Darker: the range of ocelli on under-side of hind-wing much larger, all well marked, and brought out more prominently by a dark-brown clouding surrounding them, and a suffusion of the same colour beyond the pale transverse streak.

There can be no doubt that Hoppfer's *Eusirus* is nothing more than a strongly-marked example of the ♂ *Evenus*. Such was my decided impression on merely comparing the excellent figures in Peters' "Reise;" and a specimen of the variety since received from Kaffraria entirely confirms it. Variability in the size and number of the ocelli is a character common to the greater part of the *Satyridæ*, and *Mycalesis* is no exception to the rule. In the specimen referred to, there is a further very minute ocellus close to the termination of the pale streak. Wallengren's *M. Injusta* appears to be this variety, especially as he notes its resemblance to Cramer's *Justina*, to which it certainly seems very nearly allied. Cramer's figure, however, gives two ziczac lines beneath, between ocelli and the line parallel to hind-margin, and depicts no striæ in discoidal cell. He states the species to inhabit Coromandel. *M. Caffra*, Wlgr., is very clearly a pale ♀ of *Evenus*, only varying as regards the number and distinctness of the ocelli.

Woods and copses.

October (b)—December (b), and February (c)—May (b). "September."
—D'Urban.

This butterfly is only found in woods and patches of "bush," keeping to the thickest shades, and delighting to settle on dead leaves and twigs in the narrow foot-paths. In such situations it is difficult to distinguish when at rest, its colour agreeing so well with surrounding objects.

The flight is weak and close to the ground, and two or three specimens may often be observed flying round together in small circles, and then abruptly settling. I have noticed a female quietly seated with four or five males excitedly circling about her; and the instant one admirer settled all the others would do so, when, after a little jostling, off they would all start again.

- Knysna. Plettenberg Bay.—Coll. Tri.
 Bashee River, Kaffraria (J. H. Bowker).—Coll. S. A.
 Mus.
 Cove Rock. Mowbray Park. Peelton. Graham's Town.—
 W. D'Urban, in litt.
 Cape of Good Hope. Port Natal. Interior of South
 Africa.—Coll. Brit. Mus.
 "Guinea. Querimba."—Hpfr. loc. cit.

121. *Mycalesis Narcissus*.

- Papilio Narcissus*, *Fab., Ent. Syst.*,—*Suppl.*, p. 428,
 [n. 672-3.
Satyrus Narcissus, *Godt., Enc. Meth.*, IX, p. 551, n. 181.
 " " *Boisd., Faune Ent. de Mad.*, p. 59, n. 1.
 " " *App. Voy. de Deleg.*, p. 594.
Cœnonympha Narc., *E. Doubl., App. List Lep. B. M.*,
 [p. 33.

Exp. 1 in. 5 lin.—1 in. 8 lin.

Dull-brown, with a discal yellowish-ochreous patch in each wing. Fore-wing: ochreous filling a longitudinal space lying between first median nervule and submedian nervule (usually touching base of former, but never reaching latter), extending a little above median nervule into discoidal cell, but not reaching hind-margin; crossing ochreous about its centre an outwardly-concave brown streak; enclosed by its outer portion a good-sized ocellus, black, with a shining-white pupil, between second and third median nervules; rarely, towards apex, a second, similar, but minute ocellus between the discoidal nervules. *Hind-wing:* similar in pattern, but the ochreous extends much nearer to costa, its lower portion not reaching as far as third median nervule; an ocellus in an ochreous ring, situate as in fore-wing, commonly touches ochreous patch, but is often separate from it; a smaller ocellus, just above the other, is always enclosed by the ochreous: tuft of hairs in ♂ as in *M. Erenus*, but less conspicuous. *UNDER-SIDE.*—Pale yellowish-ochreous (in ♀ with a browner tinge), hatched with very short brownish lines: beyond middle, a common brown transverse line (well-marked and sinuate in fore-wing, dentate and fainter in hind-wing), beyond which the ground-colour is paler, especially in fore-wing: ocelli distinct, but smaller than above, their pale, unhatched rings externally defined by faint reddish-brown. *Fore-wing:* a pale, brown-edged, transverse streak about middle of discoidal cell.

I know nothing of the habits of this elegant little species, which does not seem to occur further to the South than Natal. Boisduval states that it is found in Bourbon and Mauritius, about the pathways in woods and ravines. He further notes that specimens from Madagascar, where the butterfly is very common, are paler and more yellowish than usual, and that the ♀ examples generally present a row of three or four ocelli in hind-wing.

Mauritius? (E. L. Layard).—Coll. S. A. Mus.

Natal. Mauritius.—Coll. Brit. Mus.

“Madagascar (St. Marie et Grand Terre). Bourbon. Port Natal.”—Boisd.

FAMILY 7.—EURYTELIDÆ.

EURYTELIDÆ, *E. Doubl.*

BIBLIS (gen.), *Godt.*

BIBLIDES, *Boisd.*

BIBLITES, *Blanch.*

BIBLITÆ, *Chenu.*

IMAGO.—*Head* of moderate size; *eyes* sometimes hairy; *palpi* markedly *elongate*, not compressed laterally, finely and smoothly hairy beneath, separate throughout their length, very slightly converging at tips, the last joint bent at a very obtuse angle with the second and protuding horizontally about level with top of head; *antennæ* of moderate length, with a gradually-formed slender club. *Thorax* rather slender, pilose, a little longer than in the *Satyridæ*. *Fore-wings* not so broad as in the *Satyridæ*; angulated in two genera; costa but little arched; apex rather pronounced; hind-margin always more or less dentate; inner-margin straight; *costal nervure strongly swollen at base*. *Hind-wings* truncate-ovate: costa nearly straight after the strong basal curve; apex more prominent than usual in hind-wing; hind-margin more dentate than that of fore-wing; anal angle well-marked; groove formed by inner-margins incomplete, shallow, leaving more or less of abdomen uncovered. *Discoidal cell* of both wings apparently closed by a very slender nervule. *Fore-legs* much atrophied, but less so than in the *Satyridæ*, those of ♂, even, being very apparent, thin, with the femora finely hairy. Other *legs* short, rather stout, the femora pilose. *Abdomen* slender, prolonged in *Hypanis*.

LARVA.—Cylindrical, attenuated towards extremity, which is terminated by two points; *head* spiny.

PUPA.—*Suspended by tail only*: head pointed, bifid; several prominences on back.

Includes but a few species comprised in four genera, one of which (*Biblis*, Fab.) is represented in South America,—while the others are confined to Africa and Asia.

This limited Family, in Doubleday and Westwood's "Genera," is placed immediately after the SATYRIDÆ and before the LIBYTHEIDÆ, and seems to form a very complete link between these two groups, presenting the basal inflation of the costal nervure of fore-wings so characteristic of the former, and an approach to the strikingly elongated palpi and angulated wings of the latter group.* The EURYTELIDÆ are rather dull-coloured butterflies, but our few species are characterised by much elegance and delicacy of marking, especially on the under-surface. Of the two South African Genera, *Hypanis* is the more brightly-tinted. This Genus would seem to affect open country; *Eurytela* I have found in woods. The flight of the latter is of moderate strength, and usually confined to the neighbourhood of some particular bush or tree in a sunny spot.

Our two Genera, comprising but three species, may be readily distinguished; *Eurytela* having angulated fore-wings, while in *Hypanis* the hind-margin of these wings has no projection.

Genus EURYTELA.

Eurytela, *Boisd.*

Biblis (pars), *Godt.*

IMAGO.—*Eyes* hairy; *antennæ* with a gradually-formed, slender, laterally flattened, obtuse-ending club. *Wings* denticulated (rather acutely in hind-wing): *fore-wing* angulated on lower discoidal nervule, and more slightly so on second median nervule; groove formed by inner-margins of *hind-wings* incomplete, but more developed than in *Hypanis*. *Abdomen* rather short.

The two known South African species are both butterflies of a dark-brown or nearly black colour above, but may at once be distinguished by the difference in hue of the pale band which crosses the wings, which is orange-yellow in *E. Dryope* and pure-white in *E. Hiarbas*.

* I am not aware that any species of *Libythea* has hitherto been found in Southern Africa, but it is probable that *L. fulgurata*, Boisd., a native of Madagascar, may inhabit the South-Eastern coast, nor is it unlikely that other species may be discovered.

Woods and copses.

October (b)—December (e). May (m). "February and April."—D'Urban. "March (e)."—H. I. Atherstone.

This elegant butterfly was common at Knysna, but quite confined to wooded spots, where it haunted particular bushes and young trees very constantly. Several specimens would keep about one tree, on the trunk of which they delighted to settle and sun themselves, expanding their wings and shuffling about in a peculiar fashion. Their flight was not rapid, but rather high, and often long-sustained, the insects floating backwards and forwards in a pendulum-like manner, which was not ungraceful.

Knysna.—Coll. Tri.

Kleinmond River, Bathurst.—Coll. H. I. Atherstone.

Bashee River, Kaffraria (J. H. Bowker).—Coll. S. A. Mus.

"Graham's Town. East London. King William's Town."—D'Urban, in litt.

Kaffraria. Sierra Leone. Ashanti.—Coll. Brit. Mus.

"Port Natal."—Boisd.

123. *Eurytela Dryope*.

Papilio Dryope, *Cram.*, *Pap. Exot.*, pl. 78, f. E, F.

" " *Herbst*, *Ins.*—*Schmett.*, VII, pl. 168, f. [5, 6.

" " *Fab.*, *Ent. Syst.*, III, I, p. 256, n. 793.

Biblis Dryope, *Godt.*, *Enc. Meth.*, IX, Suppl., p. 824, [n. 5—6b.

Eurytela Dryope, *Boisd. App. Voy. de Deleg.*, p. 591.

Exp. 2 in.—2 in. 5 lin.

Closely allied to *E. Hiarbas*. Dark-brown, with a common transverse shining orange-yellow band, having the same direction as in *Hiarbas*, but broader and commencing at the hind-marginal projection below apex of fore-wing, extending to anal angle of hind-wing, keeping considerably closer to hind-margin in ♂ than in ♀; a common orange-yellow lunular streak along hind-margin, assuming a glistening-bluish tint towards anal angle of hind-wing. In ♀, which is paler, numerous indistinct transverse dusky striz in basal half of wing (as in Cramer's figure). UNDER-SIDE.—Very like that of *Hiarbas*: ground-colour slightly darker; white rings near bases filled with ferruginous; transverse ferruginous striz and stripe more macular and irregular; orange-yellow band represented by an ill-defined pale-ochreous one; between this band and the ferruginous stripe, a transverse, well-marked, sinuate white streak; hind-marginal streak white. In ♀ the hind-marginal region is much clouded with brown, obscuring the pale-ochreous band.

Port Natal. Sierra Leone. Ashanti.—Coll. Brit. Mus.

"Madagascar (St. Marie. Tintingue. Tamatave)."—Boisd.

Genus HYPANIS.

Hypanis, *Boisd.*, *E. Doubl.*Biblis (pars), *Godt.*

IMAGO.—*Eyes* smooth; club of *antennæ* rather longer and stouter than in *Eurytela*. *Wings* not so markedly dentate, especially *fore-wing*, which has a slightly-convex hind-margin without any approach to angulation. *Abdomen* considerably longer, but not reaching to anal angle of hind-wings.

As M. Chenu remarks, *Hypanis* has much of the aspect of the Nymphalideous genus *Melitæa*, Fab., in colour and marking. It is spread throughout Africa, and also occurs in South-Eastern Asia. No less than five species have been described and figured by Authors, but I feel convinced that Hopffer is right in referring them all to one, originally figured by Drury under the name of *Ilithyia*.

124. *Hypanis Ilithyia*.

Papilio Ilythia, *Dru.*, *Ill. Nat. Hist.*, II, pl. 17, f. 1, 2.

„ „ *Cram.*, *Pap. Exot.*, pl. 213, f. A, B; and
[214, f. C, D.

„ *Ilithuia*, *Fab.*, *Ent. Syst.*, III, 1, p. 131, n. 403.

„ „ *Herbst*, *Ins.*—*Schmett.*, IX, pl. 258, f.
[5, 6.

Biblis Ilithyia, *Godt.*, *Enc. Meth.*, IX, p. 327, n. 7.

Hypanis Ilythia, *Boisd.*, *App. Voy. de Deleg.*, p. 591.

„ *Ilithyia*, *Doubl.*, *Westw.*, *Hewits.*, *Gen. Diurn.*
[*Lep.*, pl. 68, f. 1.

Var.—*Papilio Polinice*, *Cram.*, *Pap. Exot.*, pl. 375, f.
[G, H.

Hypanis „ „ *Boisd.*, *Sp. Gen. Lep.*, pl. 9, f. 6.
„ „ „ *Doubl.*, *Westw.*, *Hewits.*, *Gen.*

[*Diurn. Lep.*, p. 411.

Papilio Goetzius, *Herbst*, *Nat. Bek.*, *Inst.*—*Schmett.*,
[IX, pl. 258, f. 1—4.

Hypanis Anvatara, *Boisd.*, *Faune Ent. de Mad.*, pl. 7, f. 5.

„ *Cora*, *Feisthamel*, *Ann. Soc. Ent. de France*, Ser.
[II, VIII, p. 249.

„ „ „ *Chenu*, *Enc. d'Hist. Nat.*, f. 516.

„ *Acheloia*, *Wallgr.*, *Lep. Rhop. Caffr.*, p. 29.

Exp. 1 in. 8 lin.—2 in. 3 lin.

Warm orange-ochreous, with variable black markings: cilia black, spotted with white. Fore-wing: a broad black band on costa (sometimes enclosing an ochreous longitudinal

line from base) emitting three transverse striæ into discoidal cell and abruptly ending in a broad, outwardly dentate, oblique projection; the inner point of the lower extremity of this projection is often united by a narrow line along first median nervule, to an irregular, broad, bifid, black marking obliquely rising from inner-margin near base,—frequently, too, its outermost dentation is joined similarly to a curved black transverse band near hind-margin, which commences on second discoidal nervule and extends to anal angle, where it contains a small spot of ground-colour; above the origin of the latter band, on costa, an oblique irregular marking, usually connected with costal band by a narrow costal edging of black, rarely joined to transverse band by a narrow ray which it emits downward; this costal marking and the transverse band are united by black nervular lines to a narrow black edging on hind-margin, which often encloses a macular ochreous line. *Hind-wing*: an irregular basal patch, externally much dentated or sub-macular, extending nearly to middle of costa; beyond middle, parallel to hind-margin, a band (continuous of transverse band of fore-wing), usually denticulate inwardly, is joined by nervular lines or streaks to narrow hind-marginal border (which is often marked, as in fore-wing, with a whitish or ochreous streak), so that a row of large spots of the ground-colour (internally ovate-rotundate, externally truncate) is formed between the two stripes; midway between basal black and band is sometimes a row of more or less distinct black spots; more rarely (in ♀), a blackish streak just before band and united to it by nervular lines. *UNDER-SIDE*.—*Excessively subject to variation, chiefly as regards hind-wing*. *Fore-wing*: black band wanting on costa, but its terminal projection and cellular striæ present (of the latter the middle one commences on costa), narrower, not so black, incompletely white-edged; other markings as on upper-side, but outer costal marking wanting, the apical region being creamy-ochreous, crossed by a more or less distinct whitish macular streak; ground-colour much paler than above; hind-marginal edging very narrow, nearly always enclosing a white line; a black spot at base of discoidal cell. *Hind-wing*: typical markings as follows: ground-colour slightly deeper than that of fore-wing, crossed by three transverse bands, viz.: two creamy or whitish, one near base bordered on both edges by a macular, black, white-edged striæ, and the other central edged internally with a row of separate black dots, externally by a black line; the third band beyond middle, dentate on both edges, black, containing fourteen white dots (two between every two

nervules); the latter band answers to that of upper-side, and, like it, is united by dark nervules to hind-marginal black border, which contains a conspicuous white streak, broken up into fourteen elongate marks; the upper portion of the large spots of ground-colour between band and hind-margin are creamy or whitish on their inner border, giving the effect of an additional pale band:—the hind-wing thus presents nine transverse bands; a small black, white-edged spot marks upper angle of extremity of discoidal cell.

Sometimes the apical region of fore-wing and ground-colour of hind-wing are *pale creamy-yellow*, in which hue the *white bands of the latter are wholly merged*. A common South African variety is that named *Cora* by Feisthamel, in which hind-wing and apical border of fore-wing are of a *deep chocolate-brown*; in this case, the white bands are strikingly conspicuous, looking like rows of pearls (the white macular streak at apex of fore-wing being also very distinct), while *the black bands and their white dots are entirely lost in the ground-colour*, only a slightly darker shade indicating the position of the usually conspicuous band beyond middle. Intermediate between *Cora* and the ordinary form comes the insect named *Anvatara* by Boisduval, in which the hind-wing is much darker than usual, and the white dots of the black band beyond middle replaced by suffused dull-red marks.

The above are the principal variations presented by this species in South Africa; but numerous linking examples are met with of which it is impossible to give full description. There can be no doubt whatever that all the hitherto-recorded species of *Hypanis* are varieties of a single species, *Ilithya* of Drury. Fabricius was the first to unite Cramer's *Polinice* with *Ilithya*, and in this he has been followed by Godart and Horsfield. But it remained for M. Hopffer to reconcile into one all the unsatisfactory species hitherto placed under this Genus, and I refer the student to his able and elaborate investigation of the matter published in Peters' "Reise, &c." (pp. 396—398), which finally confirmed my own conviction on the subject. *H. Achelonia* of Wallengren is identical with *H. Cora*, Feisthamel.

Little is known of the habits of this species. Boisduval states that, in Madagascar, it haunts "woods and fields of manioc in January and February, June and July." Mr. Bowker writes that it is "very common nearly all the year round" in Kaffraria. The latter gentleman has forwarded to me a pair taken in copulâ, both sexes belonging to the var. *Cora*, which seems as common on the Bashee as the more typical form. It therefore seems probable that the variety in question is a permanent *race* of the species.

King William's Town.—Coll. H. I. Atherstone.

Butterworth, and Bashee River, Kaffraria (J. H. Bowker).

Port Natal. Damaraland (H. Hutchinson and A. Bell).—Coll. Tri. et Coll. S. A. Mus.

South Africa. Natal. Cape of Good Hope. Sierra Leone. Congo. Madras. Ceylon.—Coll. Brit. Mus.

North India.—Coll. E. I. C. Mus.

"Port Natal. Amazoulu Country. Madagascar."—Boisd.

"Somaui Land."—Felder, Lepid. Fragm.

"Guinea. Senegal. Nubia. Abyssinia. Mozambique. Arabia. Coromandel."—Hopffer, loc. cit.

FAMILY 8.—LYCÆNIDÆ.*

LYCÆNIDÆ, *Leach, E. Doubl.*LYCENIDES, *Boisd.*LYCÆNITÆ, *Chenu.*ERYCINIDÆ (pars), *Swains.*POLYOMMATES, *Boisd.*POLYOMMATIDÆ, *Swains.*

IMAGO.—*Head* of moderate size, or rather small; *eyes* often hirsute; *palpi* usually rather long (in some Genera very long), scaly, seldom or but slightly hairy, the terminal joint slender, distinct; *antennæ* of very variable length, sometimes very gradually but often abruptly incrassate. *Thorax* markedly robust in many Genera, but generally of moderate size. *Wings* large, of variable outline; *fore-wings* usually rather truncate, hind-margin rarely elbowed about centre; *hind-wings* commonly produced about anal angle, and often bearing from one to three tails on hind-margin, the inner-margins often forming an incomplete groove about abdomen; *discoidal cells* apparently closed by almost obsolete nervules. *Legs* rather short, often thick: *fore-legs of ♂ with imperfect tarsi, in many Genera consisting of but one long joint.* *Abdomen* usually slender, sometimes very short.

LARVA.—Usually more or less *onisciform*, broadest and thickest about middle, often with dorsal humps, or with fasciculate tubercles. Head and feet very small.

PUPA.—Short, thick, usually much rounded, without angular projections. Attached by the tail, and by a belt of silk round the middle; or by the tail only (*Dipsas* sp. on pl. XII of Horsf. and Moore's "Catalogue"); rarely buried in earth (*Thecla Quercus*, Linn.)

The numerous species comprised in the Family LYCÆNIDÆ, though of small size, are, as a rule, remarkable for brilliancy of colouring and exquisite variegation of marking. Richness of hue is, however, usually confined to the upper-surface, which in the male sex often presents one vivid field of metallic orange-red or glistening blue, while in the female it is usually duller, varied with spots, or much suffused with greyish or

* The family *Erycinidæ*, mentioned in the Table of Families as represented in South Africa, is omitted; as of the two species, *Pentila tropicalis*, Boisd. Sp., and *Lemonias Pretus*, Cram. Sp., which I was disposed to refer to that group, the former seems more truly an aberrant Lycænidean, and the latter, given by Cramer as a native of the Cape, belongs to a genus so exclusively South American that there seems but little doubt that Cramer was misinformed as to its *habitat*.

blackish, and occasionally wholly brown, presenting a totally different aspect to that of the male. The under-side, on the contrary, differs but very little in the two sexes, and an examination of it almost invariably suffices for identifying the male and female of a species: it is commonly of some soft shade of grey or brownish, marbled or streaked with transverse darker or paler lines, or with rows of white-ringed spots, and is not unfrequently ornamented with very brilliant metallic dots, usually on the hind-wings. The various Genera present considerable diversity of habit, some preferring to settle on the bare ground, others on low plants, some sporting about bushes, and others delighting in the topmost sprigs of lofty trees. The majority are not strong or rapid in flight, and all settle at very short intervals, but *Loxura*, the species of *Lycæna* which approach *Thecla*, and many of the Genus *Zeritis*, are very swift in their movements. Nearly all, if not the whole, of the Butterflies of this Family, when settled, have a singular habit of *rubbing the erect hind-wings against each other*, so that their upper-surfaces press together in a manner resembling that of the blades of a pair of scissors when repeatedly opened and shut. The hind-wings are often moved backwards and forwards when half-expanded, and in either case the action is so marked that it at once stamps the butterfly as a member of the LYCÆNIDÆ.

This Family comprises more South African species than any other, no less than fifty different kinds being already known, comprising eleven Genera. Many are very common, and would seem to be generally distributed, such as *Lycæna Palemon*, *Lingeus*, *Bætica*, *Telicanus*, *Messapus*, &c., *Chrysophanus Orus*, *Zeritis Pierus*, *Protumnus*, &c., but others, such as *Loxura Alcides*, *Iolaus Silas*, *Zeritis Alphæus*, *Thero*, *Perion*, &c., are decidedly local in their *habitats*, and by no means commonly met with.

Genus LOXURA.

Loxura, *Horsf.*

Myrina, *Godt.*

IMAGO.—*Eyes* smooth: *palpi* remarkably long and stout (especially the last joint), scaly, slightly hairy beneath at base, separate, not rising above forehead, but horizontally porrected; *antennæ* short, very stout, very gradually thickening to extremity. *Thorax* very long and stout, with conspicuous elongate, tufted *pterygodes*. *Fore-wings* very slightly dentate, bluntly angulated below apex. *Hind-wings* more distinctly dentate; the *submedian* nervure produced to

support a lobe at anal angle, prolonged into a very long, broad, twisted tail. *Legs* short, very thick: first joint of *tarsi* as long as the other four together.

LARVA?—Onisciform; with a dorsal row of prominences.

The characters given of this very interesting Genus are those presented by the two South African species, *L. Alcides* and *L. dermaptera*. The former seems more generally distributed, occurring as far to the South and West as Knysna, while the latter has only hitherto been brought from Natal. Species of *Loxura* are found in India and the Eastern Archipelago.

125. *Loxura Alcides*.

Papilio Alcides, *Cram., Pap. Exot.*, pl. 96, f. D, E.

Hesperia „ *Fab., Ent. Syst.*, III, 1, p. 283, n. 86.

Myrina „ *Godt., Enc. Meth.*, IX, p. 594, n. 4.

„ „ *E. Doubl., List Lep. Brit. Mus.*, II, p. 21.

„ „ *Doubl., Westw., Hewits., Gen. Diurn. Lep.*

Var.—*Papilio Corax*, *Cram., Pap. Exot.*, pl. 379, f. D, E.

„ „ *Herbst, Ins.—Schmett.*, X, pl. 286,

[f. 1, 2.

Loxura Alcides, *Duncan, Nat. Lib.—Ent.*, V, pl. 25, f. 3.

Exp. 1 in. 1 lin.—1 in. 7 lin.

♂. *Intense, metallic, ultramarine-blue*. *Fore-wing*: blue forming a large semicircle based on inner-margin, filling cell, but not reaching costa, which is rather widely black-bordered; on hind-margin a *ferruginous-red patch* forming a sort of border, strongly convex inwardly (being widest below apex), and separated from the blue by a black stripe, which widens at anal angle. *Hind-wing*: all blue, except on margins, of which costa and hind-margin have a black border of moderate width, and inner-margin a broad, dark-grey one; anal-angular lobe and tail ferruginous-grey, irrorated with greyish-white; edging base of lobe superiorly a streak of bluish scales; on lobe, a ferruginous spot. *UNDER-SIDE*.—*Ferruginous-brown, with an ochreous tinge*; in both wings (more distinct in hind-wing) an ochreous line closing cell, and a common transverse ochreous streak beyond middle. *Fore-wing*: streak only reaches first median nervule from near costal edge, which is dusted with yellowish; apex closely yellow-dusted; inner-margin pale-greyish, gradually shading off into ground-colour. *Hind-wing*: streak well-marked, continuous from costa to beyond third median nervule, where it is abruptly angulated, and is thence *white*

to inner-marginal edge, which is also narrowly white; between this portion of the streak and lobe of anal angle, much greyish-white irroration; a pale streak along lower part of hind-margin; spot on lobe usually half-hidden in fold of wing.

♀. *Blue much less brilliant*, occupying a smaller space, so that its black bordering is proportionally much broader, especially in hind-wing, where the apical and hind-marginal border is wider than that of inner-margin. *Hind-wing*: streak of bluish scales prolonged hind-marginally as far as discoidal nervule. UNDER-SIDE.—Quite as in ♂.*

February (m)—April (e).

Very local: usually in gardens, on fig-trees, sometimes on vines. The blue of the upper surface of this curious species is so rich and brilliant that the other "Blues" of the country appear dingy in comparison. Even *Iolaus Silas*, splendid as he is, is second in depth and intensity of hue to *Alcides*. The flight of this butterfly is very rapid, but very brief, resembling that of the *Hesperidae*, and seldom extending beyond three or four yards at a time. I have twice met a specimen carried off by the wind. It is a most pugnacious insect, and soon loses its long tails in its constant combats among the rough leaves of the fig. *Alcides*, like his great namesake of old, is as fearless as he is strong, and is not at all inclined to quit his favourite seat on the approach of the collector: I have struck at a specimen as many as five times successively without inducing it to move more than a foot or two away. The insect is not easily seen when at rest, its colour closely resembling that of the dry fig-leaves and stems. Miss Rex informed me that she had occasionally taken specimens in the ripe figs split open by birds.

Knysna.—Coll. Tri.

Bashee River, Kaffaria (J. H. Bowker).—Coll. S. A. Mus.

"King William's Town. Newlands, Kakoon River."—W. D'Urban, in litt.

Natal. West Africa. Sierra Leone.—Coll. Brit. Mus.

126. *Loxura dermaptera*.

Loxura dermaptera, *Wlgr., Lep. Rhop. Caffr.*, p. 34.

Myrina ———— (?), *Doubl., Westw., Hewits., Gen. D.*

————— (?) ———— (?), *Angas, Illustr. S. Afr., pl. of*
[*Lep.*]
[*Lep.*, f. 9.]

Exp. 1 in. 7 lin.

Brownish-black; a blue space in each wing. Fore-wing: blue forming a semicircular patch on inner-margin, reaching

* I append a description of what I imagine is the Larva of this species; but the death of the few individuals I tried to rear prevented me from verifying this belief.

About three-quarters of an inch long: onisciform. Pale-green, thickly irrorated with minute black atoms; except ninth segment, which is ashy, mixed with ferruginous. A narrow ashy stripe down the back. Each

above median nervure, and a little beyond middle. *Hind-wing*: blue forming a curved transverse stripe between subcostal and submedian nervures, reaching to just before anal angle, which is lobed and marked with a dark-red spot; tail whitish, black-margined. Cilia greyish. UNDER-SIDE.—*Soft, pale brownish-grey. Fore-wing*: paler towards inner-margin; costa and hind-margin edged with ochreous. *Hind-wing*: hind and inner margins edged with ochreous, excepting anal-angular lobe, which is black-edged and marked with a purplish-red spot; two similar spots near it, close to hind-margin; tail black; before lobe, from inner-margin, two short, curved, black, whitish-edged, transverse streaks, of which the outer is indistinct.

This species is readily distinguished from *L. Alcides* by the want of chestnut-red tips to the fore-wings, much fainter blue spaces, and grey under-surface. The tails, also, of the single specimen from which the above description was made are shorter and narrower than in *Alcides*, and not twisted. The insect appears to be rare, Wallengren's description being made from a single damaged specimen in Wahlberg's collection.

South Africa (Zoolu).—Coll. Brit. Mus.

"Caffraria."—Wahlberg.

Genus MYRINA.

Myrina, Godt., *Horsf.*

IMAGO.—Allied to *Loxura*, but of a less robust structure. *Palpi* long, but shorter and thinner than in *Loxura*; *antennæ* longer, more slender. *Hind-wings* bearing one to three tails, of which that on third median nervule is sometimes very long.

Not having seen *Myrina Pallene* of Wallengren, I cannot state whether I consider the species truly referable to this Genus.

127. *Myrina Pallene*.

Myrina Pallene, Wallgr., *Lep. Rhop. Caffr.*, p. 36.

"♀. Exp. 1 in. 7 lin.

"*Whitish-yellow. Fore-wing*: at apex broadly bordered with fuscous, which extends along hind-margin as far as third median nervule.* *Hind-wing*: towards anal angle tinged

segment with a dorsal prominence, most marked on the fifth, ninth, and tenth segments: the fifth, seventh, and eighth prominences ferruginous, the ninth conspicuously white. In March, feeding on the cultivated Fig; its colour closely resembling that of the under-surface of the leaves.

* In Wallengren's description "ad exitum costæ 8: ræ," but this is no doubt a misprint of "2: dæ."

with *fulvous*. UNDER-SIDE.—*Deeper in colour: crossing disc of both wings a black streak*, sharply interrupted and angulated on *hind-wing*, between third median nervule and submedian nervure. *Fore-wing*: a short black line closing cell. *Hind-wing*: more fulvous towards anal angle than above; a black spot on hind-margin, between second and third median nervules, and another, larger and elongate, at anal angle (the latter is also marked on *upper-side*); *two tails* slender, black on both sides, not longer than abdomen. *Cilia* blackish above and below. Markings of under-side very faintly apparent on upper-side."

"Kaffraria (Wahlberg)."—Wallgr.

Genus IOLAUS.

Iolaus, Hübn., E. Doubl.

IMAGO.—*Eyes* smooth; *palpi* long, markedly divergent from base, rather stout, densely scaly, the last joint short and slender; *antennæ* stout, very gradually incrassate, considerably longer than in *Loxura*. *Thorax* robust. *Wings* much as in *Loxura*, but not of so thick a substance. *Fore-wing*: not at all angulated; from inner-margin, in ♂, before middle, springs a line of long silky hairs. *Hind-wing*: less produced at anal angle (which is lobed); tail on submedian very much shorter and narrower; a prominence on second, and a short tail on third, median nervule; in ♂, a conspicuous, circular, smooth space or patch near costa and base.

I am acquainted with three South African species referable to this Genus, all highly beautiful. In structure they appear quite intermediate between the striking robustness of *Loxura* and the slighter conformation of *Amblypodia*. The under-side of all three species is white, with transverse striæ, which are crimson-red in *I. Silas* and *I. Sidus*, and ochreous-brown in *I. Bowkeri*.

128. *Iolaus Silas*.

♀. *Iolaus Silas*, Westw.,—Doubl., Westw., Hewits., Gen.
[D. Lep., p. 74, f. 5.]

Exp. 1 in. $3\frac{1}{2}$ lin.—1 in. $6\frac{1}{2}$ lin.

♂. *Metallic pure-blue, without any purplish tinge*. *Fore-wing*: blue forming a larger semicircle than in *I. Alcides*; a moderately-wide black border on costa becomes very broad at apex, extending thence rather broadly to anal angle;

inner-marginal tuft of hairs ochrey-yellow. *Hind-wing*: a black costal and hind-marginal border, rather variable in width, but becoming very narrow towards anal angle; a more or less complete black streak parallel to it, between discoidal nervule and submedian nervule, interiorly edges two crimson-red spots between submedian and second median nervule; on anal-angular lobe, a crimson, blue-dusted spot; inner-margin rather widely dark-grey; tails black, white-tipped, that on submedian white-edged; shining costal circular space black, filling nearly whole of cell. *Cilia* of *fore-wing* blackish; of *hind-wing* white. **UNDER-SIDE.**—*Glistening-white*: a common, transverse, dull, crimson-red line beyond middle. *Fore-wing*: line commencing near costa, interrupted on each nervule, not reaching inner-margin, often indistinctly marked. *Hind-wing*: streak well-marked, straight from costa to second median nervule, where it bends outwardly, forming the first spot present on upper-side, beyond which it is black, interrupted, and inclining inwards to inner-margin; immediately before this part of line, a similar interrupted black one, not reaching beyond submedian; spot on lobe conspicuous, including a black spot; an indistinct greyish clouding between line and hind-margin, which is black-edged towards anal angle.

♀. *Blue pale, faint, inclining to violet*, not metallic, occupying a smaller space, so that the dark margins (which are dull-blackish) are broader, especially in hind-wing. *Fore-wing*: blue much paler on median nervules, occasionally almost white. *Hind-wing*: black streak broader, extending to join apical blackish; instead of two crimson spots, an *orange-ochreous, broad band*, formed of five large spots, between second subcostal and submedian. **UNDER-SIDE.**—Quite like that of ♂.

Mr. Bowker gives me the following particulars relative to this species: "Usually solitary, but occasionally in groups; I have taken as many as five from one small tree. They fly rapidly, in short jerks, often opening and shutting the wings, and are easily taken when they light within reach of the net. November to July: favourite resort, the flowers of mistletoe."

"Pluto's Valley, Fish River Bush. King William's Town."—W. D'Urban, in litt.

Bashee River, Kaffraria (J. H. Bowker). Natal.—Coll. Tri. et Coll. S. A. Mus.

South Africa (Zoolu).—Coll. Brit. Mus.

Natal.—Coll. C. Morland.

129. Iolaus Sidus.

Iolaus Sidus, mihi. N. Sp.

Exp. 1 in. 2 lin.—1 in. 3 lin.

Closely allied to *I. Silas*, Westw. ♂. *Soft pale-blue: apical half of fore-wing black*; circular costal patch on hind-wing large, conspicuous, glistening-whitish, broadly ringed with blackish. *Fore-wing*: costa grey, edged with pale-reddish near base, abruptly widening and deepening into apical black before extremity of discoidal cell; blue forming an imperfect semicircle, having for its base the inner-margin of wing, but not reaching anal angle, to which the apical black (covering the entire hind-margin) narrowly extends. *Hind-wing*: hind-margin edged with a black line; three tails precisely as in *Silas*, but less twisted; inner-marginal groove dark-grey, clothed and fringed with whitish hairs: lobe of anal angle marked with a pale crimson-red spot, outwardly black-dotted, and marked with a few bluish scales; a small, indistinct, similar spot immediately above it. Cilia greyish in fore-wing: white in hind-wing (tinged with yellow near anal angle). *UNDER-SIDE*.—*White, tinged with greyish*: one transverse ferruginous-red streak in fore-wing, two in hind-wing; costa of fore-wing, and hind-margin of hind-wing, with an orange edging. *Fore-wing*: ferruginous-red streak rather broad, straight from costa beyond cell, in direction of anal angle, to second median nervule, where it abruptly terminates; a semicircular patch of grey on inner-margin near base, and lying over it a curious row of long black hairs springing from edge of inner-margin; near anal angle, above submedian nervure, an elongate blackish mark. *Hind-wing*: first red streak as in fore-wing, from costal nervure (before middle) as far as third median nervule, where it narrows, and is thence a bi-angulated thin *black* streak to inner-margin a little beyond middle; outer red streak not far from and almost parallel to hind-margin, narrowing and becoming almost obsolete after passing discoidal nervure: space between streak and hind-margin greyish, enclosing an additional red spot between second and third median nervules similar to that at anal angle, which is larger than on upper-side, merged with the smaller red spot, and outwardly edged with a bluish line; from discoidal nervure the hind-marginal edging is black.

♀. *Violaceous-whitish, suffused with blue from bases. Fore-wing*: border narrower and dusky-blackish. *Hind-wing*: costa with a dusky border, widest at apex; from it

run two diminishing dusky streaks along hind-margin, the outer as far as second median nervule, the inner indistinctly to inner-margin: spot on anal angle, with that above it (which is large), centred with white; a third, conspicuous, subquadrate, orange, black-dotted spot between second and third median nervule. UNDER-SIDE.—Quite like that of ♂, save for the absence of any grey patch on inner-margin of fore-wing; and the spots on hind-wing being less conspicuous. (Descr. from single specimen.)

The ♂ is readily distinguished from ♂ *I. Silas* by its smaller size, less glittering blue surface, strongly and doubly streaked under-surface, with its orange edging, and more conspicuous circular patch on upper-side of hind-wing. The front of the head and bases of pterygodes, which are both black (the former being white-striped) in *Silas*, are ferruginous-red in *Sidus*. The fringe of hairs on inner-margin of fore-wing, which is yellow in *Silas*, is black in the latter species. The ♀ is very different in the two species.

Mr. Bowker supplies me with the following note on this exquisitely beautiful *Iolaus*: “Very rare and local: I have only met with them at one spot—a *sneezewood-tree* at the edge of a forest. December to April.”

Bashee River, Kaffraria (J. H. Bowker). Natal (W. Guenzius).—Coll. Tri. et Coll. S. A. Mus.

130. *Iolaus Bowkeri*. N. Sp.

Iolaus Bowkeri, mihi.

Expands 1 in. 5 lin.

♀. *Pale-fuscous, suffused from bases with light-blue, with a transverse, macular, white band beyond middle. Fore-wing:* blue extends along inner-margin to near anal angle, covers bases of median nervules, and almost fills discoidal cell; closing cell, a fuscous streak, bounded on either side by a white space; white band consisting of six spots, of which the two central are much smaller than the rest, and the two lower the largest and subquadrate, the lowest spot joining extremity of inner-marginal blue. *Hind-wing:* blue suffusion lying between subcostal and submedian nervures, a narrow line of ground-colour separating its superior portion from the white band, the nervules crossing which are clouded with blue; white band more even and continuous than in fore-wing, commencing on costa, and consisting of seven spots, the last being merged with the blue suffusion; beyond band a parallel lunular bluish-white streak, united to it by clouded nervules,

which leaves only ovate spots of ground-colour between band and streak; immediately within hind-margin a white line, which on lobe of anal angle unites with streak to form a white space, marked with a conspicuous black spot; a similar spot between second and third median nervules; a black, white-edged and tipped tail on third median and on submedian, the latter twice as long as the former. Cilia white, except on superior two-thirds of fore-wing, where a fuscous tint prevails. UNDER-SIDE.—*White, with ochreous, brown-edged, transverse, irregular stricæ*; a disco-cellular streak, a stria before middle, a broad stria beyond middle, and a hind-marginal and submarginal line, common to both wings. *Fore-wing*: from subcostal to submedian nervure, close to base, an ochreous stripe; transverse stricæ begin on costa, the outer one more irregular and much dentate. *Hind-wing*: costa at base edged with ochreous; inner transverse stria much narrower than in fore-wing; both stricæ very acutely angulated on submedian nervure, and thence *diverted, the inner quite, the outer very nearly, to base*; submarginal line, which includes two blackish spots next costa, and is interrupted on submedian, similarly diverted, edging inner-margin to before middle; black spots interiorly edged with blue scales, of which a few are discernible between the spots.

The underside of this beautiful *Iolaus* differs much from any species that I have seen. The colour and direction of the stricæ are something similar in *Amblypodia Erylus*, Godt.

Described from a single specimen sent from Kaffraria by Mr. J. H. Bowker, to whom, in honour of his long and successful exertions in the cause of entomology, I have dedicated the species. Mr. Bowker writes: "Caught at a bend of the river, seated on a sprig of mistletoe; very rare."

Bashee River, Kaffraria (J. H. Bowker).—Coll. Tri.

Genus AMBLYPODIA.

Amblypodia, Horsf., E. Doubl.

IMAGO.—General characters of *Iolaus*. *Palpi* more slender, acute, and ascendant: *antennæ* longer, thinner, commonly varied with white rings, not gradually incrassate, but with a distinct club. *Fore-wings* of ♂ usually more acute at apex, the hind-margin being slightly concave. *Hind-wings* more produced in anal angular region; tails sometimes as in *Iolaus*, with a less prominent dentation on second median nervule,—sometimes only one pair (on submedian nervure); no shining circular space. *Legs* more slender, femora with long hairs; fore tarsi of ♂ composed of only one long joint (*A. Erylus*, Godt.).

It is difficult to fix with certainty the distinctive characters of many of the tailed Genera of *Lycænidae*, such as *Amblypodia*, *Dipsas*, *Myrina*, *Aphnæus*, *Anthene*, &c., as no two authors agree on the subject. The whole group is in great want of that revision upon which Mr. Hewitson is now engaged. Of the four South African species I have referred to *Amblypodia*, the nearest to *Iolaus* is *A. Natalensis*, which is readily recognised by the gilded stripes of the under-surface. *A. Erylus* has two tails on each hind-wing, while *A. Hirundo* has only one long tail at anal angle. *Leroma*, Wallgr., I very doubtfully include in this Genus; but its describer seems to think it belongs to the Genus *Arhopala* of Blanchard and Boisduval, which Horsfield and Westwood agree in considering identical with *Amblypodia*.

131. *Amblypodia Natalensis*.

Aphnæus Natalensis, *E. Doubl., List Lep. B. Mus.*, II,
[p. 26.]

Amblypodia ,, *Doubl., Westw., Hewits., Gen. D.*
[*Lep.*, pl. 75, f. 4.]

Spindasis Massilicatzii, *Wallengr., Lep. Rhop. Caffr.*, p. 45,
[n. 1.]

Amblypodia Natalensis, *Hpfr., in Peters' Reise nach*
[*Moss.,—Ins.*, p. 399.]

Exp. 1 in. 1 lin.—1 in. 6 lin.

♂. *Dull violaceous-blue, with broad brownish-black borders.* *Fore-wing*: blue forms a semicircle on inner-margin from base to beyond middle, sometimes extending upwards into cell; just beyond end of cell, an *orange* spot, sometimes very indistinct; in some specimens a faint trace of a second orange spot a little beyond the other. *Hind-wing*: blue leaves a tolerably broad costal, hind-marginal, and inner-marginal dark border; hind-marginal border containing a bluish lunular line near anal angular projection, which is *orange-yellow*, marked with two silvery-dotted black spots: *tails* black, orange at base and white at tip. *UNDER-SIDE*.—*Pale whitish-yellow: with gold-lined, purple-bordered, black-edged transverse fasciæ*: common to both wings, a fascia from costa before middle (confluent on median nervure with a black basal patch), extends across hind-wing to before anal angle, whence it is angulated to about middle of inner-margin,—a fascia from costa about middle (becoming dull and gradually obsolete below second median) to first median of hind-wing beyond middle,—two submarginal purplish striæ (of which

the inner commences with a costal gold spot) becoming confluent and bright-orange, with a gold streak before anal angle of hind-wing,—and a hind-marginal, black, edging line. *Fore-wing*: at base, two purple spots, and a short transverse streak a little beyond them, *not* gilt; beyond second fascia, a costal spot and a fascia from costa to first median, coloured like other fasciæ. *Hind-wing*: seven spots, of which the larger have gilt centres, in basal region, which is greyish; anal-angular projection of ground-colour, its black spots very conspicuous: *a remarkable longitudinal fold*, clothed with silky pale-brown hairs, runs from base between median and submedian nervures as far as orange colouring before anal angle.

♀. *Paler; blue much duller and of smaller area. Fore-wing*: orange spots beyond cell expanded into *transverse bands*, sometimes confluent on median nervules; a short dull-whitish band before them, crossing cell and joining blue. *Hind-wing*: a dusky band from costa crosses a dull-whitish space before hind-marginal border; anal-angular orange pale and dull; lunular marginal line *white*. **UNDER-SIDE**.—As in ♂, but fasciæ less brilliant.

A ♀ specimen from Natal, in my collection, is very dull and suffused in colour, the orange bands being replaced by indistinct ochrey-whitish. An example in the British Museum, from Sierra Leone, I find mentioned in my notes as very brightly and distinctly marked; the short band of fore-wing crossing cell being *orange* (Wallengren notes a similar ♀), *red-ochreous replacing the purple* of the under-side fasciæ, and the two hind-marginal striæ enclosing a red space.

This brilliantly-ornamented species is very closely allied to *A. Vulcanus*, Fab. (*Etolus*, Cram.), but differs in the marking of the under-surface, *Vulcanus* having a conspicuous additional fascia in the basal region, in place of the numerous spots of *Natalensis*, and a similar hind-marginal fascia (confluent with third fascia in each wing) instead of the two striæ. *Vulcanus* ♀, too, has no blue colouring above. Godart gives the fasciæ as the ground-colour, and *vice versâ* in describing the under-surface of *Vulcanus*. Wallengren evidently had not access to Doubleday and Westwood's "Genera," or he would not have created his new species, *Massilicatzi*. Neither he nor Hopffer mention the curious hairy fold in hind-wing of ♂; which is also a character of *Vulcanus*.

Natal (W. Guenzius).—Coll. Tri.

Port Natal. Delagoa Bay. Sierra Leone.—Coll. Brit. Mus.

Damaraland.—Coll. C. J. Andersson.

132. *Amblypodia Erylus*.

Polyommatus Erylus, Godt., *Enc. Meth.*, IX, p. 633,
[n. 60.]

Iolaus Orejus, Hpf., *Monatsberichte d. Königl. Akad.*
[*der Wissensch. zu Berlin*, 1855, p. 641.]

♀. *Iolaus Orejus*, *Hpf.*, in *Peters' Reise nach Moss*.—
[*Ins.*, p. 401, pl. 25, f. 10, 11.

Thecla Orejus, *Wallgr.*, *Lep. Rhop. Caffr.*, p. 35, n. 3.

Exp. 1 in. 1 lin.—1 in. 3 lin.

♂. *Dull-brown, with a more or less intense changing pink-violet lustre*: a brown line along hind-marginal edge. *Fore-wing*: covering bases of median nervures an ill-defined dusky patch. *Hind-wing*: hind-marginal line edged with white on both sides (except near apex); touching it internally, between second median nervule and anal angle, three black spots, of which the first is inwardly edged by an orange, the second by a whitish, lunule,—and the third, on lobe of angle, small, broadly orange, with an inward white lunule; tails black, white-edged and tipped. *Cilia* greyish, paler in hind-wing. *UNDER-SIDE*.—*Whitish-grey, with glistening white-edged orange-ochreous transverse striæ*: common to both wings, a well-marked stria beyond middle, in hind-wing interrupted, and acutely angulated beyond third median nervule,—a submarginal, sublunulate thin stria, also angulated in hind-wing,—and a hind-marginal edging line; in each wing a double striola closing cell. *Hind-wing*: a conspicuous spot, coloured like striæ, near base, between costal and subcostal nervures; orange lunules of first and third spots near anal angle more conspicuous, the third marked with bluish or greenish-silvery scales, a patch of which also marks the interval between these two spots.

♀. *Brownish-grey, without violet lustre*: a faint bluish tinge near bases. *Fore-wing*: costa with a narrow ochreous edge; sometimes an indistinct paler fascia on disc, widening downwards from its origin on first median nervule. *Hind-wing*: two submarginal rows of white lunular markings (of which the inner is broader) between second subcostal and submedian nervule; the outer row ends with the three spots which are more conspicuous than in ♂: hind-marginal line and its white edges very distinct. *UNDER-SIDE*.—*Whiter*: the markings brighter, clearer, and more conspicuous.

Wallengren notes the very close affinity of Hopffer's *Orejus* to *P. Erylus* of Godart, and a comparison of the descriptions with Hopffer's figure and with specimens has convinced me of the identity of the two. The figure in Peters' "Reise" shows a ♀ in which the union of the outer row of lunules with the inner edge of the hind-marginal line gives the effect of the "yeux marginaux à iris blanc" mentioned by Godart. The latter author notes a character of the ♂ overlooked by Wallengren, viz., the dusky central space in fore-wing, which is presented by all the nine specimens now before me. Mr. D'Urban informs me that this is the species labelled "*Aphneus Certhis*, Boisd. MS." in the British Museum.

"On small trees at edge of forest,—April."—Bowker, in litt.

Bashee River, Kaffraria (J. H. Bowker).—Coll. Tri. et Coll. S. A. Mus.

King William's Town, British Kaffraria.—W. S. M. D'Urban.

"Tette."—Hpfr., in Peters' Reise.

"Java."—Godt.

133. *Amblypodia Hirundo*.

Thecla Hirundo, Wallgr., *Lep. Rhop. Caffr.*, p. 35, n. 4.

Exp. 9—11 lin.

Dark ash-grey, irrorated from bases with very pale bluish-grey: anal angle of hind-wing produced and lobed, and ending in a *long twisted, black, broadly white-edged and fringed tail*, on submedian nervure. *Fore-wing*: on hind-margin, close to anal angle, a black, indistinctly white-ringed spot ("sometimes, in ♀, a second obsolete one before it,"—Wallgr.) *Hind-wing*: paler near inner-margin; along hind-margin a row of dark white-ringed spots, very indistinct, excepting the three last, which are black and well-marked (that on anal-angular lobe being the largest); before this, a row of indistinct whitish lunules. *Cilia* of fore-wing grey, white at anal angle; of hind-wing wholly white. **UNDER-SIDE**.—*Whitish-grey; with white-bordered yellow-ochreous striae*: common to both wings—a transverse, irregular streak, interrupted on nervules, beyond middle—a submarginal lunulate streak,—a very indistinct row of dusky spots just beyond this,—and a line just within hind-marginal edge; in each wing a double disco-cellular striola, with two costal spots above it. *Fore-wing*: ocellus at anal angle conspicuous, bounded internally by last lunule of submarginal streak. *Hind-wing*: spot on lobe and that between second and third median nervules black, inwardly edged by a faint-yellow lunule,—the space between the two spots fuscous; streak beyond middle strongly recurved on third median.

The under-side of this delicate little species is very like that of *A. Erylus*. The ocellus of fore-wing and single long white tail of hind-wing give a very peculiar aspect to the sombre colouring of the upper-side.

"October, March, and June; abundant."—W. D'Urban, in litt.

King William's Town. Keiskamma, near Bodiam.—Coll. Tri. et Coll. D'Urban.

Bashee River, Kaffraria (J. H. Bowker).—Coll. S. A. Mus.

134. *Amblypodia* (?) *Leroma*.

Arhopala (?) *Leroma*, *Wallgr.*, *Lep. Rhop. Caffr.*, p. 42.

"Exp. 1 in. 2 lin. (nearly).

"*Pale-fuscous, glistening in parts.* *Fore-wing*: a faint-fuscous spot at end of discoidal cell. *Hind-wing*: traces of a clay-coloured spot at anal angle. *UNDER-SIDE*.—*Clay-coloured*, hind-wing more griseous. *Fore-wing*: two black spots in cell marked with dull-silvery; a silvery line, black-edged on both sides, closes cell; near costa two silvery, *not* black-edged, spots; beyond cell, a double curved row of variously-shaped black spots, placed at equal distances between nervules; on hind-margin, a double series of very obsolete fuscous *lineolæ* not silver-marked. *Hind-wing*: at base of cell, a very minute fuscous spot; some very obsolete fuscous rings; beyond cell, a row of lunular lines, its lower extremity consisting of paler, very obsolete spots; beyond this row another, equally obsolete, but marked with dull-silvery; thence, on disc, some silvery scales; at anal angle a black spot. Cilia whitish above, of the ground-colour beneath."

Wallengren further states that this insect has the "eyes smooth, palpi long and porrect (as in *Myrina*), antennæ without perceptible club; wings shaped as in *Thecla*, the hind-wings tailed."

"*Kaffraria* (Wahlberg)." —Wallgr.

Genus SITHON.

Sithon, *Hübner*.

IMAGO.—*Head* rather broad: *eyes* pilose; *palpi* smaller and more slender than in *Amblypodia*,—the terminal joint very thin, longer in ♀ than in ♂; *antennæ* long, ringed with white, with a well-defined, stout, cylindrical club. *Thorax* very stout in ♂. *Fore-wings* produced apically: anal angle rather prominent, rounded; in ♂, an inner-marginal *tuft of hairs*, as in *Iolaus*. *Hind-wings* produced in anal angular region, the angle itself very prominently lobed: a linear tail on third, and a slight projection on second, median nervule; inner-margins forming a pretty complete groove; in ♂, a smooth shining circular space as in *Iolaus*, but not so conspicuous. *Legs* thick: fore-tarsi of ♂ much atrophied.

This Genus forms a good link between *Lycæna* and *Iolaus*: from the former it is distinguished by the lobe on

hind-wing and the peculiar badges possessed by the ♂, and from the latter by the abruptly-clubbed antennæ, hairy eyes, and single tail of hind-wing. The only known South African species is very like a large *Lycæna* in appearance, especially the ♀.

135. *Sithon Batikeli*.

Lycæna Batikeli, *Boisd., Faune Ent. de Mad.*, p. 24, pl. 3,
[f. 5.]

Sithon Antalus, *Hpfr., in Peters' Reise nach Mossamb.—*
[*Ins.*, p. 400, pl. 25, f. 7—9.]

Lycæna Anta, *Trimen, Trans. Ent. Soc., Lond.*, 3rd Ser.,
[I, p. 402.]

Exp. 1 in. 1 lin.—1 in. 5 lin.

♂. Shining æneous-brown, shot with violet from bases; cilia greyish-white. *Fore-wing*: inner-marginal tuft of hairs black. *Hind-wing*: a rather long, linear, black, white-tipped tail at extremity of third median nervule; two black spots on hind-margin, respectively just above and below origin of tail; lobe of anal angle marked with a greenish-silvery-scaled, black spot. *UNDER-SIDE*.—Pale-greyish; in both wings an incomplete, brownish-grey, whitish-edged ring, closing discoidal cell, a row of similar rings, confluent, forming a rather broad transverse band beyond middle, and a submarginal row of brownish-grey, lunular markings, indistinctly white-edged inwardly and outwardly. *Hind-wing*: near base, two or three whitish-ringed fuscous (sometimes dull-ferruginous) spots, forming a short transverse row; hind-marginal spot above tail marked inwardly by a yellowish lunule, that below tail all bluish-silvery; spot on anal lobe inwardly scaled with bluish-silvery.

♀. Bluer than ♂, excepting near hind-margins, which are broadly brown; markings similar; a dusky disco-cellular streak in each wing. *UNDER-SIDE*.—Quite similar, the markings more distinct.

Hopfer distinguishes his *Antalus* from *Batikeli*, *Boisd.*, merely by the fuscous colouring of the three spots on under-side of hind-wing near base, which Boisduval describes as red. But this distinction, at best a very slight one, cannot hold good, now that I have seen, as above stated, intermediate examples in which the spots are decidedly ferruginous. The description in "*Faune Ent. de Mad., &c.*," is very good, but the figure is most inaccurate both in drawing and colour, the under-side markings being shown as *bright red and blue*, with a dash of yellow at anal angle of hind-wing.

"Rare: flies swiftly from tree to tree.—March and April."—Bowker, in litt.

Bashee River, Kaffraria (J. H. Bowker).—Coll. Tri. et S. A. Mus.

“Graham’s Town. King William’s Town (Mrs. Drake).”—Coll. D’Urb.

Natal.—Coll. W. C. Hewitson.

Genus LYCÆNA.

Lycæna, *Fab.*, &c.

Polyommatus, *Latr.*, *Godt.*

IMAGO.—Usually of slender structure. *Head* rather small: *eyes* often hairy; *palpi* rather long, ascendant, laterally compressed, scaly, in some species hairy beneath, last joint short, acute: *antennæ* of moderate length or rather short, ringed with white, the club abruptly formed, usually flattened. *Fore-wings* rather elongate: *costa* nearly straight after basal curve: hind-margin more or less convex. *Hind-wings*: hind-margin bearing a short linear tail on third median nervule in many species; anal angle not produced; inner-margins not forming a groove.

LARVA.—Broad, onisciform, slightly pubescent: usually green or yellow, with longitudinal and oblique lateral streaks.

PUPA.—Short, thick, rounded, smooth.

This beautiful Genus seems to attain its maximum of development in Europe, no less than sixty-nine species being catalogued in Staudinger’s recent list. Only four of the European species are tailed, and of these two, *Bætica* and *Telicanus*, occur in South Africa. The species, as in most large Genera, are, in many instances, very closely allied; and, owing to the scant knowledge we possess of the earlier states of these butterflies, it is often extremely difficult, if not impossible, to draw the line between species and varieties. The general uniformity of pattern chiefly causes this difficulty, and in colouration, also, the species run into each other in a remarkable manner.

I have adopted the division of the Genus into tail-less and tailed species as most convenient and obvious, but there is no clear line of division between these groups, though the species seem to a certain degree capable of arrangement around two type-forms, of which, in South Africa, *L. Bætica* and *L. Cissus* may be regarded as the respective representatives. There is also a concurrent difference of flight and habits between the two groups,—the tailed species, as a rule, more resembling *Thecla* and the allied robuster Genera in these respects,—while the tail-less, or what may be termed,

par excellence, the *European*, group, has a slow, weak flight, never rising far from the ground. Blue is the predominant colour in this Genus, especially in the males; the females being brown or grey shot with blue, and not infrequently spotted on the upper-surface. The under-side pattern consists of a central spot or lunule, a discal transverse band of spots, and one or more rows of spots or lunules on hind-margin. This is traceable even in the more typical species of the tailed group, in which the irregularity and confluence of the white edges of the spots impart a striated aspect to the under-side. These insects are of small size, the largest not expanding two inches, and the smallest being among the most minute of known Butterflies. No less than twenty-four species are recorded as South African, and there is little doubt that many more will be discovered.

A.—Hind-wing with two or three short tufts of hair on hind-margin.

136. *Lycæna Emolus*.

♂. *Polyommatus Emolus*, *Godt., Enc. Meth.*, IX, p. 656. *Lycæna Emolus*, *Boisd., App. Voy. de Deleg.*, p. 588.

♂ (?). *Lycæna Sichela*, *Wallgr., Lep. Rhop. Caffr.*, p. 37. Exp. 11 lin.—1 in. $1\frac{1}{2}$ lin.

♂. *Glistening dark-violaceous; a slender black, hind-marginal edging line; cilia whitish. Hind-wing: close to hind-margin two to three inconspicuous black spots between second median nervule and submedian nervure; at extremity of each of these nervures, as well as that of third median, a thin tuft of whitish hairs. UNDER-SIDE.—Brownish-grey: in each wing—a double dark streak (enclosing one of ground-colour) closing cell, the whole marking being on both sides white-edged,—a similar fascia, composed of confluent spots, across wing beyond cell, in hind-wing bi-angulated near inner-margin, in fore-wing with the last spot before the rest of the fascia,—two submarginal rows of whitish lunules enclosing a darker space,—and a very indistinct interior whitish edging to hind-marginal dark line. Fore-wing: rarely a whitish ring in cell. Hind-wing: on costa before middle, a white-ringed spot similar to that closing cell; first and third of hind-marginal spots always distinct, greenish-silvery-dusted and interiorly orange-lunuled, the second indistinct, silvery dusted,—sometimes obsolete.*

♀. *Pale-greyish, shot with violaceous-blue from base: a blackish disco-cellular spot and transverse macular fascia in*

each wing: a blackish hind-marginal border, in *hind-wing* intersected by a row of white lunules. *Hind-wing*: hind-marginal white line conspicuous; spots black, the first orange-lunuled. *UNDER-SIDE*.—As in ♂; but all white edgings broader, conspicuous; outer edging of transverse fascia and inner submarginal row of lunules sometimes suffused and confluent, forming a white band.

The anal-angular region of hind-wing of ♂ is considerably produced.

I do not feel certain as to the species just described being truly Godart's *Emolus*, which is noted as possessing a white-ringed black spot about middle of inner-margin of hind wing, and but one spot on hind-margin. Wallengren's diagnosis of *Sichela* accords well with the examples above characterised with regard to the upper-surface, but I cannot quite reconcile his rather complicated description of the markings of under-side of hind-wing with the specimens before me. Wallengren notes *Sichela* as "ecaudata," but as the little tufts in the *Lycæna* which I describe are often wanting in worn individuals, I do not find this a difference of any importance. Mr. D'Urban informs me that an example in the British Museum, apparently identical with his Kaffrarian specimens, is labelled "Borneo."

Not uncommon. Gardens and bushy spots.

August (b)—Sept. (b); October (c)—April (e).

This is a rapid flier, but only for a very short distance at a time. In habits as well as in robust structure it approaches the genus *Thecla*. It is fond of settling on young shoots of oak-stumps. Common in some seasons in the Botanic Gardens, Cape Town. I only saw a single specimen at Knysna.

Cape Town. Knysna. Bashee River, Kaffraria (J. H. Bowker).—Coll. Tri. et Coll. S. A. Mus.

King William's Town.—Coll. W. D'Urban.

"Bengal."—Godt. "Amazoulou Country."—Boisd.

137. *Lycæna Amarah*.

Polygonimatus Amarah, Guér., *Voy. en Abyss., par Lefebv.*,
[p. 384, t. 11, f. 5, 6. ♀.]

Lycæna Amarah, Wallgr., *Lep. Rhop. Caffr.*, p. 40.

Exp. 11 lin.—1 in. 1 lin.

♂. *Pale-grey, with a metallic sub-brassy lustre: a brown hind-marginal bounding line; cilia greyish-white. Hind-wing: traces of two rows of dull-whitish lunules,—those of outer row combining with a whitish inner edging of hind-marginal line to form imperfect rings, and the two last enlarged and orange (the upper with an adjacent black spot) on either side of third median nervule; a slender, tail-like tuft of white hairs at end of third median nervule, and a similar tuft at end of submedian nervure. UNDER-SIDE.—Brownish-grey;*

with white and brownish fasciæ and rows of lunules : in each wing, beyond middle, an irregular, submacular fascia (composed of a broad white central streak, on both sides bordered with brownish, and edged with a white line),—a similar short fascia, closing cell, touching edge of long fascia on first median,—and two rows of thin white lunules succeeded by a white line. *Fore-wing* : between median and submedian, a short, wide, abruptly-truncate, longitudinal black stripe. *Hind-wing* : seven conspicuous, black, white-ringed spots, viz. : one at base, four in a transverse row near base, and two on costa (respectively immediately before origin of fascia and double row of lunules); orange-lunuled hind-marginal spot bluish-silvery-dusted; a smaller, similar spot at anal angle.

♀. *Darker, not so metallic.* *Fore-wing* : a disco-cellular fuscous line; a faint submacular streak just before hind-marginal line. *Hind-wing* : row of lunules and rings usually conspicuous; orange lunules and spot larger; occasionally a third orange lunule and black spot just above second median. UNDER-SIDE.—As in ♂ : ground-colour darker.

The peculiar hue of the upper-surface at once distinguishes this species from the preceding one, and indeed from all the other South African *Lycæna*.

“October to April: common on bushes.”—D’Urb., in litt.

King William’s Town (W. D’Urban). Bashee River, Kaffraria (J. H. Bowker).—Coll. Tri. et Coll. S. A. Mus.

B.—Hind-wing with a linear white-tipped tail at end of third median nervule.

138. *Lycæna Bætica*.

Papilio Bæticus, Linn., *Syst. Nat.*, II, p. 789, n. 256.

Hesperia Bætica, Fab., *Ent. Syst.*, III, 1, p. 280, n. 77.

Polyommatus Bæticus, Godt., *Enc. Meth.*, IX, p. 653.

Lycæna Bætica, Horsf., *Cat. Lep. E. I. C. Mus.*, p. 80.

„ „ *E. Doubl., List Lep. Brit. Mus.*, II,
[p. 43.]

Exp. 1 in.—1 in. 5 lin.

♂. *Silky violet-blue, with a fuscous hind-marginal edging.* *Hind-wing* : two well-marked black spots, outwardly whitish-edged, near anal angle, of which the larger is above third median nervule. UNDER-SIDE.—*Pale ochreous-grey, with undulated, transverse, white striæ: common to both wings, beyond middle, a fascia composed of a middle broad streak, with a parallel line at equal distances on either side, variable in regularity, angulated in hind-wing below third median,—*

a white stripe, narrow in fore-wing but wider and conspicuous in hind-wing, excepting near inner-margin, touching the greater portion of outer line of fascia,—followed by a lunulate stria and a hind-marginal edging. *Fore-wing*: a short triple fascia, similar to the longer one described, across cell, and another, like it, at extremity of cell. *Hind-wing*: base lightly irrorated with blackish; two to four transverse striæ in basal portion, in places more or less confluent; mixed up with these a triple streak closing cell: two black spots exteriorly edged with bluish or greenish-silvery, and interiorly bordered by an orange lunule (indistinct in lower spot).

♀. *Dull-brownish, vividly shot with shining-blue from base and over disc.* *Hind-wing*: sometimes almost devoid of blue; beyond middle, a transverse row of broad, more or less conspicuous, white lunules; a row of thinner lunules near margin combine with a hind-marginal line to form bluish-white rings, of which the two next anal angle are complete, enclosing the two black spots. *UNDER-SIDE*.—As in ♂; but marking more conspicuous, especially the white stripe in fore-wing.

Cilia in both sexes greyish at origin, white on outer edge.

LARVA.—"Darker or lighter green: the back streaked with red. In pods of *Colutea arborescens*,* or the common Green Pea."—Godart.

PUPA.—"Yellow, with five rows of black dots on the back and under-surface. The Butterfly emerges after the tenth or twelfth day."—Godart.

Gardens, roadsides, woods and copses, &c.

Throughout the year: most common from October to April.

This beautiful *Lycæna* may always be seen in gardens, flitting about leguminous plants; it is also very frequent about the gay-flowered "Keurboom" (*Virgilia Capensis*), a tree that, according to the late Dr. Pappe, has rapidly naturalised itself in the Western Province of the Colony, its proper home being on the Eastern Frontier. *L. Botica* has a very extended geographical range, as will be seen from the appended list of localities, but does not seem to occur in America or Australia.

Cape Town. Genadendal (G. Hettarsch). Knysna. Plettenberg Bay. St. Helena. Damaraland (J. A. Bell).—Coll. Tri.

Butterworth and Bashee River, Kaffraria (J. H. Bowker). Natal. Madagascar.—Coll. S. A. Mus.

Cape of Good Hope. Madeira. Teneriffe. Spain. Turkey. North India. Landoor (Himalaya). Punjaub. Ceylon. China. Hongkong. Java.—Coll. Brit. Mus.

* Known as the "Bladder Senna."

King William's Town.—Coll. W. D'Urban.

"Amazoulu Country. Madagascar. Bourbon. Mauritius."—Boisd.

Guernsey. Brighton, England (1859).—*Vide* "Entomologist's Weekly Intelligencer," No. 160, p. 25.

139. *Lycæna Telicanus*.

Papilio Telicanus, *Herbst, Nat. Bek. Ins.*—Schmett., [pl. 305, f. 6—9.

" " *Hübner, Enc. Schmett.*—*Pap.*, f. 371-2, [553-4.

" *Bæticus*, *Esper, Eur. Schm.*, t. 91, f. 2. ♂.

Polyommatus Telicanus, *Godt., Enc. Meth.*, IX, p. 655.

Lycæna Telicanus, *Boisd., Faune de Mad., &c.*, p. 24.

" " *Hpfr., in Peters' Reise*, p. 406.

Lycæna Namaqua (*Boisd. MS.*), *E. Doubl., List Lep.* [Brit. Mus., p. 42.

Var. *Lycæna Hoffmannseggii*, *Zeller, Ent. Zeit.*, 1850, [p. 312 ♀ (second. Hpfr.).

Exp. 10 lin.—1 in. 2 lin.

♂. *Pale, glossy, bluish-violaceous, with a pinkish tinge*: a blackish line edging hind-margin; cilia whitish, unspotted. *Hind-wing*: on each side of third median nervule, an indistinct blackish spot; between spots and hind-marginal edging a white line, often indistinct. *UNDER-SIDE*.—*Brownish-grey, with double transverse white stricæ enclosing darker-brownish*: common to both wings—a double stria before middle,—another closing cell, and confluent at origin of first median with a third, much arched, submacular similar stria quite across wing,—a submarginal, continuous, white, lunular stripe,—a confluent hind-marginal row of white-ringed sublunular spots,—and a linear blackish edging. *Fore-wing*: inner white edge of first stria connected with base by a longitudinal white streak, surmounted by a dark-brown dash on subcostal nervule. *Hind-wing*: base dusky, with two whitish streaks (one on costal edge, the other more transverse); two hind-marginal spots (being the last of the row) conspicuous, ringed with brilliant bluish or greenish-silvery, and in a more or less complete circle of orange or ochreous-yellow.

♀. *Greyish-brown, shot with vivid blue from bases over discs; the white-edged stria closing cell, with the confluent stria beyond it more or less distinctly marked* (less apparent in hind-wing); marginal lunular stripe and row of spots very indistinct in fore-wing, well-marked in hind-wing: two black

spots of hind-wing larger than in ♂. UNDER-SIDE.—More conspicuously marked, *especially lunular white stripe*, which is much broader and whiter, particularly in hind-wing.

Hopffer considers Zeller's *Hoffmannseggii* an African variety of *Telicanus*, stating that specimens from Nubia and the Cape are referable to it; but Staudinger notes it in his "Catalog der Lepidopteren Europa's," 1861, as an American species. My description is made from South African specimens only. Hopffer states that specimens from the Cape, Mozambique, and Guinea are the largest, those from Egypt and Arabia the smallest, while European examples hold the middle place:—the size of the South African specimens is, however, very variable.

Common. Gardens, and open ground.

November (b)—June (b).

Fond of settling on flowers, and easily taken. Habits similar to those of *L. Bœtica* and *L. Lingæus*.

Cape Town. Knysna. Plettenberg Bay.—Coll. Tri.

"From Graham's Town to King William's Town."—W. D'Urban, in litt.

Butterworth, Kaffraria (J. H. Bowker). Madagascar.—Coll. S. A. Mus.

Southern Europe. Cape of Good Hope.—Coll. Brit. Mus. Damaraland.—Coll. C. J. Andersson.

"Cape. Guinea. Egypt. Arabia."—Hopffer, in Peters' Reise.

140. *Lycæna Lingæus*.

Papilio Lingæus, Cram., *Pap. Exot.*, pl. 379, f. F, G.

„ *Lyngeus*, Herbst, *Ins.—Schmett.*, X, pl. 288, [f. 1, 2.

Polyommatus Lingæus, Godt., *Enc. Meth.*, IX, p. 658, n. [139.

Lycæna Lingæus, E. Doubl., *List Lep. B. Mus.*, p. 40.

Exp. 11 lin.—1 in. 1 lin.

♂. *Dull violaceous-bluish, very glossy* (in some specimens shot with silvery-greenish): *a blackish hind-marginal line*; cilia white, irregularly varied with blackish, chiefly in fore-wing. UNDER-SIDE.—*Pale brownish-grey, with transverse white-edged darker fasciæ, and a brown cloud in hind-wing.* Fore-wing: from costa, a single stria near base, curving inward to origin of median nervure,—a short fascia (of which the outer white reaches below median nervure) crossing cell,—another similar fascia at extremity of cell; beyond middle, a submacular fascia from costa to third median nervure; along hind-margin a whitish stripe, interrupted with brown, and containing a row of small, dark, lunular spots. Hind-wing:

base brown; an interrupted macular fascia before, and a very irregular one about middle; *on disc*, a brown cloud,—on the lower edge of which, between second and third medians, is a conspicuous *subquadrate white spot*; on either side of third median nervule a faintly yellow-ringed, black, bluish-silvery-dusted spot; along hind-margin a very indistinct row of confluent whitish rings.

♀. *Grey-brown, shot with violet-blue from base over disc. Fore-wing*: short fascia closing cell well-marked on this side, its white edges suffused; two or three suffused whitish spots in broad hind-marginal brown. *Hind-wing*: a dark streak closing cell; rarely, a row of indistinct bluish-white marks beyond middle; a nearly obsolete hind-marginal row of whitish lunules, that above, and sometimes that below, third median, with an adjacent blackish spot. UNDER-SIDE.—As in ♂.

Not uncommon. Woods, bushy spots on hill-sides, &c.

October (e)—May (e). “June.”—D’Urban.

This pretty species is very easily taken, as it is fond of hovering about low bushes. It often settles on flowers. The ♀ is comparatively rarely met with.

Cape Town. Knysna. Plettenberg Bay. Bashee River, Kaffraria.—Coll. Tri. et Coll. S. A. Mus.

“King William’s Town. Keiskamma River.”—W. D’Urban, in litt.

South Africa.—Coll. Brit. Mus.

“Amazoulou Country.”—Boisd.

141. *Lycæna Palemon*.

Papilio Palemon, *Cram.*, *Pap. Exot.*, pl. 390, f. E, F.

Lycæna Palemon, *E. Doubl.*, *List Lep. B. Mus.*, II, p. 40.

Exp. $7\frac{1}{2}$ lin.—1 in.

Allied to *L. Lingeus*.

♂. *Coppery-violaceous, with a brown hind-marginal edging*: cilia white, regularly interrupted with brown. *Hind-wing*: a small blackish, pale-edged spot on hind-margin, just above third median nervule. UNDER-SIDE.—Very like that of *Lingeus*, but browner. *Fore-wing*: no basal stria, outer edge of both cellular fasciæ not reaching below median nervure; costal origins of fasciæ more minute and separate than in *Lingeus*; fascia beyond middle more macular, inclining inwards and reaching submedian nervure; marginal stripe almost obliterated with brown, except at apex, which is rather conspicuously whitish. *Hind-wing*: fascia about

middle darker, much more regular, united at end of cell with brown cloud; the white spot enlarged to a *broad whitish inner-marginal space*, and more deeply incising the cloud by a *conspicuous acute dash* between first and second medians: hind-marginal spots smaller, duller than in *Lingeus*, the lower often obsolete.

♀. *Cupreous-brown, more or less shot with violet from bases; or dull greyish-brown, without any violet lustre. Fore-wing*: an indistinct disco-cellular spot. *Hind-wing*: black spot whitish-ringed, sometimes dusted with bluish-silvery: indistinct traces of a hind-marginal row of whitish rings or lunules. UNDER-SIDE.—As in ♂.

Common. Open ground generally.

Apparently throughout the year, but not noticed in May or July.

Of this pretty little species I have two examples little more than seven lines in expanse of wings—so that it is worthy of the pigmy distinction of being held the *smallest* of the South African Butterflies. A greater number of small specimens of *L. Messapus* are met with, on an average, but I have never found this species less than eight lines in expanse. *Palemon* is a very low flier, and settles very frequently on low flowers. It seems to prefer damp spots.

Cape Town. Caledon (J. X. Merriman). Knysna. Plettenberg Bay.—Coll. Tri.

“From Graham’s Town to King William’s Town.”—W. D’Urban, in litt.

Cape Town. Bashee River, Kaffraria (J. H. Bowker).—Coll. S. A. Mus.

South Africa.—Coll. Brit. Mus.

142. *Lycæna Theophrastus*.

Hesperia Theophrastus, *Fab., Ent. Syst.*, III, 1, p. 281,
[n. 82.]

Polyommatus Theophrastus, *Godt., Enc. Meth.*, IX, p. 658.

Lycæna Theophrastus, *Horsf., Cat. Lep. E. I. C. Mus.*,
[p. 73.]

Exp. 9 in.—1 in.

♂. *Glistening violet-blue, with a narrow blackish hind-marginal edging: cilia white. Fore-wing*: a thin, blackish, costal line; a conspicuous broad, blackish lunule closing cell. *Hind-wing*: between second and third median nervules a blackish hind-marginal spot; hind-marginal blackish inwardly edged with a white line. UNDER-SIDE.—*White, with black strizæ and spots*: in each wing—a streak along lower edge of costal nervure, twice as long in fore-wing as in hind-wing,—a streak closing cell,—an irregular, much curved and interrupted, transverse row of narrow spots rather beyond middle

(the spots in fore-wing more confluent than in hind-wing),—a lunulate row of narrow confluent marks,—a submarginal row of ovate spots,—and a thin black edging line. *Fore-wing*: from submedian nervure, near base, an oblique upward-curving stria to subcostal before middle. *Hind-wing*: a transverse row of four elongate spots near base; four or five spots of submarginal row next anal angle filled with greenish-silvery.

♀. *Blackish, shot from bases over discs with bright-blue: a whitish discal space in each wing*, on which disco-cellular lunule and transverse row of spots are more or less conspicuous; submarginal row of spots, on both sides whitish-edged (very indistinct in fore-wing). *UNDER-SIDE*.—As in ♂; markings slightly larger and blacker.

This seems a rare species in Southern Africa. I have never met with it, nor has it been taken by Mr. D'Urban or Mr. Bowker.

South Africa. West Africa. North India.—Coll. Brit. Mus.

Canara.—Coll. E. I. C. Mus.

143. *Lycæna Sybaris*.

Lycæna Sybaris, *Hpfr.*, *Mon. d. K. Preuss. Ak. d. Wiss.*,
[1855, p. 642.]

„ „ *Wallgr.*, *Lep. Rhop. Caffr.*, p. 37.

„ „ *Hpfr.*, in *Peters' Reise nach Moss.*, pl. 26,
[f. 6—8.]

Expands 10 lin.—1 in.

Allied to *L. Theophrastus*, Fab.

♂. *Bluer* than *Theophrastus*: hind-marginal edging broader (in hind-wing traversed by a lunulate white line): cilia of fore-wing spotted with fuscous. *Hind-wing*: spot larger, darker, merged in blackish edging. *UNDER-SIDE*.—White, faintly tinged with yellowish: arrangement of markings similar to that shown by *Theophrastus*, but all the marks broader, blacker,—the spots much rounder and more separate; instead of lunulate row before submarginal spots is a row of conspicuous, separate spots (in fore-wing larger than those beyond them). *Hind-wing*: three or four spots next anal angle outwardly edged with greenish-silvery.

♀. *Whiter* than in *Theophrastus*, especially towards Lind-margin of hind-wing: all spots larger and darker; blue suffusion only at bases. *UNDER-SIDE*.—As in ♂.

Characters of ♀ from Hopffer's figure and description. A distinct and very beautiful species.

Bashee River, Kaffraria (J. H. Bowker).—Coll. S. A. Mus.
 Damaraland (J. A. Bell).—Coll. Tri.
 “Querimba.”—Hopffer, in Peters’ Reise.

144. *Lycæna Hintza*.

Lycæna Hintza, mihi. N. Sp.

♀. *Lycæna Rosimon, Wallgr., Lep. Rhop. Caffr., p. 38.*

Allied to *L. Rosimon*, Fab.

Exp. 11 lin.—1 in. 1 lin.

♂. *Shining violet-blue: a narrow hind-marginal blackish edging. Hind-wing:* the usual hind-marginal blackish spot. *UNDER-SIDE.—White, with black striz and spots:* in each wing—a stria closing cell (in fore-wing from costa and broad, in hind-wing short, thin, and angulated); an irregular, much-interrupted, transverse row of conspicuous spots beyond middle; two submarginal rows of spots, the inner of elongate sublinear, the outer of small rounded, spots; and a black edging line. *Fore-wing:* subcostal stripe continued on costa to end of cell; below it, a broad upward-curving stria from submedian next base; last three spots of transverse row confluent. *Hind-wing:* short subcostal stria divided into two spots; beyond it a transverse row of four spots; third spot of transverse row of eight far beyond the rest, almost touching second spot of inner submarginal row; last two spots of outer row large, faintly bluish-silvery-dotted.

♀. *White:* shot with violaceous-bluish from bases: *the black markings of under-side suffusedly marked. Fore-wing:* costa and hind-margin clouded with fuscous, on the latter obliterating the markings and joining the three outermost spots of transverse row: a whitish spot at anal angle. *Hind-wing:* costa narrowly fuscous-clouded. *UNDER-SIDE.—*As in ♂: bluish-silvery of two spots of hind-wing brighter.

Cilia in both sexes white, in *fore-wing* spotted with blackish.

There can be little doubt that the specimen noted by Wallengren as *Rosimon* belongs to this species. His description is not detailed, but he particularly notes the cilia as white, spotted in *fore-wings* with black, a character very constant in *Hintza*, while in *Rosimon* the *entire* cilia are as constantly conspicuously black-spotted. The blue ♂ at once distinguishes the species from *Rosimon*, and denotes a relationship to *Theophrastus*. The ♀ of *Rosimon* presents a much broader white discal field, in hind-wing uncrossed by transverse row of spots; the basal blue is more brilliant and with a *greenish* tinge: and with regard to the under-side, the spots of the common inner submarginal row are much broader; while in hind-wing the

spots of the transverse row, instead of being quadrate and nearly central, are elongate, and all but the two first close to, and usually touching, those of inner submarginal row,—and the subcostal stria is entire.

“Not common: November and February.”—D’Urb., in litt.

King William’s Town.—Coll. W. D’Urban.

Bashee River, Kaffraria (J. H. Bowker).—Coll. S. A. Mus.

145. *Lycæna Calice*.

Lycæna Calice, *Hpfr.*, *Mon. d. K. Preuss. Ak. d. Wiss.*,
[1855, p. 642.]

„ „ *Wallgr.*, *Lep. Rhop. Caffr.*, p. 38.

„ „ *Hpfr.*, in *Peters’ Reise*, pl. 26, f. 4, 5.

Nearly allied to *L. Rosimon*, Fab., and *L. Hintza*, mihi.

Exp. 10 lin.—1 in.

White, with black margins and spots. Fore-wing: base, costa, and inner-margin suffused with blackish; a large, elongate, black, transverse mark from inner-margin near base; a spot closing cell; and several spots of an irregular row beyond middle, joining hind-marginal black, and isolating a quadrate white spot not far from apex. *Hind-wing*: a blackish suffusion at base, along costa (leaving part of its edge white), and along hind-margin; beyond middle, a much-curved row of quadrate black spots (usually more or less confluent with hind-marginal blackish), widely interrupted between second subcostal and discoidal nervules; several indistinct black spots at base; in hind-marginal blackish a row of indistinct black spots (of which the two next anal angle are sometimes faintly bluish-silvery-dotted), occasionally whitish-ringed, always followed by a thin white line, indistinct towards costa. Cilia of *fore-wing* blackish, with a white spot at anal angle; of *hind-wing* whitish, more or less blackish at origin. *UNDER-SIDE*.—*White, with black striæ and spots*: pattern as in *Rosimon* and *Hintza*, but nearer *Rosimon*. *Fore-wing*: subcostal stripe ending abruptly in a spot on costa before end of cell; stria from inner-margin more regular; stria closing cell straighter; spots of transverse row beyond middle confluent (*the third forming an elongate projection towards hind-margin*),—the sixth and seventh widely disjointed from the rest, and forming a stria in a line with, and almost touching, that closing cell; two submarginal rows of spots,—the inner linear a little below costa, but thence of large quadrate spots (the second touching fifth of row beyond middle),—the outer of rounded spots; a black edging line. *Hind-wing*: at base a spot (*not a stripe*), followed by a transverse row of four spots; other markings very much as

in fore-wing, except row beyond middle, which is interrupted as on upper-side; four to six spots of outer submarginal row marked with bluish-silvery.

The ♂ and ♀ of this species are alike. On the under-side of fore-wing it sometimes happens that the projection from transverse row beyond middle joins the spot commencing inner submarginal row, so that a quadrate white spot is isolated on costa. The entire absence of any basal blue readily distinguishes *Calice* from *Rosimon* and from *Hintza* ♀.

"Not common: October, December, and April."—D'Urb., in litt.

King William's Town (W. D'Urban). Bashee River, Kaffraria (J. H. Bowker).—Coll. Tri. et Coll. S. A. Mus.

"Querimba. Senegal."—Hopffer, in Peters' Reise.

146. *Lycæna Jobates*.

Lycæna Jobates, *Hpf.*, *Monatsberichte d. Königl. Akad.*
[*d. Wissensch. zu Berlin*, 1855, p. 642.

„ „ *Hpf.*, in *Peters' Reise nach Moss.*,—
[*Ins.*, p. 409, pl. 26, f. 9, 10.

„ Siwani, *Trimen, Tr. Ent. Soc., Lond.*, 3rd Ser.,
Exp. 1 in. [I, p. 402.

♀ (?) Pale-blue, inclining to violet, with greyish margins.
Fore-wing: greyish edging borders costa, widens to a broad space at apex, and thence narrows to a point at anal angle.
Hind-wing: greyish edging broad on costa, narrowing to a thin line along hind-margin; from first median nervule to anal angle a submarginal, macular, orange band, marked exteriorly with two black spots, between first and third median nervules (the upper spot very indistinct); a short, linear, greyish-white tail at extremity of third median nervule.
UNDER-SIDE.—Pale whitish-grey; in both wings a greyish, white-margined streak closing discoidal cell; a row of small, black, white-ringed spots beyond middle (in fore-wing from fifth subcostal nervule to submedian nervure, and the first spot very minute,—in hind-wing very irregular, the spots nine in number), and two indistinct submarginal lines.
Hind-wing: three conspicuous, black, white-ringed spots near base, viz., one above subcostal nervure, the second in cell, the third below submedian nervure; orange band commencing on discoidal nervule. Cilia greyish-white.

"February; rare."—D'Urb., in litt.

In Hopffer's figure of the ♂, there is, in fore-wing, no greyish edging on costa before extremity of cell, and in hind-wing there is a submarginal row of blackish spots, between the last three of which and hind-marginal line is a white line.

King William's Town.—Coll. W. D'Urban.

"Querimba."—Hopffer, in Peters' Reise.

C.—Hind-wing with a very short or almost obsolete tail at end of third median nervule.

147. *Lycæna Thespis*.

Papilio Thespis, Linn., *Syst. Nat.*, II, p. 791.

„ „ „ *Mus. Lud. Utr. Reg.*, p. 318,
[n. 136.]

Polyommatus Thespis, Godt., *Enc. Meth.*, IX, p. 683.

Lycæna Thespis, Boisd., *App. Voy. de Deleg.*, p. 588.

♀. *Papilio Pitho*, Linn., *Mus. Lud.*, &c., p. 337.

Exp. 11 lin.—1 in. 1 lin.

♀. *Bright shining-blue, with a narrow, blackish, hind-marginal line; cilia broad, white, sharply and regularly intersected with black. Fore-wing: a faint line closing cell. Hind-wing: two faint-blackish hind-marginal spots, one on either side of third median nervule. UNDER-SIDE.—Whitish, much intersected and chequered with quadrate blackish-grey or ochrey-grey spots. Fore-wing: costa and hind-margin more or less tinted with ochrey-grey; a transverse spot in cell, another (surmounted by two smaller spots) closing it; a very irregular, interrupted transverse row of spots beyond middle, only separated in parts by white spots from a regular row of spots (parallel to hind-margin) beyond it; a row of minute white lunules edging the latter combine with the ochrey tint to form a pale hind-marginal border, marked with a row of very indistinct dark dots; inner-margin dull-grey. Hind-wing: three irregular transverse rows of ochrey-grey quadrate spots, more or less confluent on inner-margin; hind-marginal border as in fore-wing, but more tinted with ochreous superiorly: two hind-marginal spots faintly silvery-centred.*

♀. *Blackish, shot with blue from bases over discs. Fore-wing: inner transverse row of under-side distinct, black, separated from hind-marginal blackish by conspicuous pure-white spots; disco-cellular spot large, with a whitish dot on each side; a row of minute indistinct bluish dots near hind-margin. Hind-wing: two submarginal rows of bluish lunules, the inner row more or less confused with discal blue, the outer forming three incomplete rings near anal angle; black spots barely distinguishable from hind-marginal blackish. UNDER-SIDE.—As in ♂; but white ground much brighter and clearer, especially on hind-margins. Hind-wing: transverse rows separately traceable to inner-margin; metallic centres of spots more brilliant.*

Has a *very short* tufted tail on third median nervule of hind-wing, not observable in worn specimens.

Common; usually singly. Open ground generally.

August (b)—April (c).

This is the brightest in hue of the South African *Lycæne*, and is otherwise easily to be known by its broad white and black fringes and singularly chequered under-side. Its tails are almost rudimentary. Linné seems to have taken the ♀ for a "Skipper," comparing it with *Pyrgus Malvæ* under the name of *Pitho*.

Cape Town. Stellenbosch. Knysna. Plettenberg Bay.
—Coll. Tri.

Port Elizabeth.—Coll. W. D'Urban.

South Africa.—Coll. Brit. Mus.

"Bay of Port Natal."—Boisd.

148. *Lycæna Celæus*.

♀. *Papilio Celæus*, *Cram., Pap. Exot.*, pl. 379, f. K, K.
? *Hesperia Parsimon*, *Fab., Ent. Syst.*, III, 1, p. 303,
[n. 147.]

Polyommatus Parsimon, *Godt., Enc. Meth.*, IX, p. 683.

Lycæna Parsimon, *Boisd. App. Voy. de Deleg.*, p. 588.

„ *Celæus*, *E. Doubl., List Lep. Brit. Mus.*, II,
[p. 51.]

Polyommatus Asteris, *Godt., Enc. Meth.*, IX, p. 657.

Lycæna Asteris, *Wallgr., Lep. Rhop. Caffr.*, p. 40.

Var. *Lycæna Methymna*, *Trimen, Tr. Ent. Soc.*, 3rd
[Series, I, p. 280.]

Exp. 1 in. 2 lin.—I in. 9 lin.

♂. *Dark violaceous-blue, pale violaceous-blue, or glistening silvery-blue with a violaceous tinge; hind-margin with a narrow blackish edging*, close before which (in hind-wing nearly always, in fore-wing occasionally) is a more or less distinct row of spots: cilia white, usually black-spotted in hind-wing, rarely so in fore-wing. *Fore-wing*: a very distinct disco-cellular black lunule of variable width (thinnest in the silvery-blue examples, in one of which it is almost obsolete). *Hind-wing*: spot of row between second and third median nervules black, edged inwardly by an orange lunule (broadest in pale violaceous-blue specimens). **UNDER-SIDE**.—Very variable. *Paler or darker brownish-grey*: in each wing—a broad reniform white-ringed spot, darker than ground-colour, at end of cell,—a transverse row of confluent similar spots beyond middle,—two submarginal rows of white lunules enclosing a darker space (the lunules of the inner row acute,

and, except in the pale-violaceous-blue examples, confluent with outer white edging of transverse row of spots; those of the outer row forming, with a hind-marginal line, white rings). *Hind-wing*: first and last spots of transverse row small, rounded, black; near base a transverse row of four small, black, white-ringed spots; hind-marginal black spot bluish-silvery-dusted, as well as a smaller spot next anal angle.

♀. *Varies from blackish-brown broadly shot with violaceous-blue from bases over discs to pale grey-brown without a trace of blue.* *Fore-wing*: disco-cellular spot broad, reniform, usually very conspicuous, but in the *pale grey-brown* specimens thinner or nearly obsolete; hind-marginal brown faintly varied with whitish spots. *Hind-wing*: usually a more or less distinct streak closing cell, followed, in some of the darker specimens, by traces of the dark transverse row of spots on under-side; rings of hind-marginal spots, as well as row of suffused lunules before them, white in intermediate examples, bluish in darkest, and faint or wanting in palest specimens; orange lunule of black spot usually broad and conspicuous (fainter in darkest specimens), between it and anal angle one or two imperfect orange lunules in intermediate examples. *UNDER-SIDE*.—As in ♂, but even more variable. Both sexes with a very short tail on hind-wing.

Var. ♂ and ♀.—*Dark-brown*, often with a reddish gloss; cilia in both wings conspicuously black-spotted; marginal spots wanting, or barely traceable. *Fore-wing*: disco-cellular spot nearly obsolete. *Hind-wing*: black spot small, indistinct without orange lunule. *UNDER-SIDE*.—Like that of the darker ordinary examples, but browner: row of spots beyond middle more irregular, in both wings bent inwards on median nervule. *Tails* wanting.

So continuous and gradual is the linking series of specimens between the ♀ of the variety just characterised (described by me in the *Trans. Ent. Soc.* as *L. Methymna*, ♀) and the ♀s of the excessively-variable *L. Celcius*, that I find myself unable, in spite of the striking dissimilarity between the ♂s, to record this variety as distinct. The specimens described as *Asteris* by Godart (and latterly by Wallengren) appear to belong to the variation above described as “glistening silvery-blue” in the ♂: examples of this, as well as of that with the “pale violaceous blue” ♂, have only reached me from Kaffraria. The ♀s of these variations are distinct, though nearly identical in upper-side markings, the under-side respectively presenting the differences above-noted as occurring in the ♂s. I have not seen any ♂ that seems to correspond with the “pale grey-brown” ♀s (the “pale violaceous-blue” ♂ is the nearest) which seem common at Natal, and most resemble Cramer’s figures. The dark ♂s, with the dark broadly-blue shot ♀s, I have taken abundantly near Cape Town and also at Mossel Bay (in these, as well as in the variety, the disco-cellular spot of under-side is very

often confluent with the transverse row beyond it, in one or both wings).* The variety is plentiful on the hills at Wynberg, and I have also a specimen from the Caledon Division.

Local: numerous where it occurs. Open, sandy country generally.

September (m)—January (b).

This, the largest of the South African *Lycæne*, is not unlike *L. Arion*, Linn., and is conspicuous when flying. It is easily taken, having the low flight of the tail-less group of the Genus.

Cape Town. Genadendal (G. Hettarsch). Mossel Bay. Graham's Town (H. J. Atherstone). Butterworth and Bashee River, Kaffraria (J. H. Bowker). Natal (R. C. Jones,—Döhne).—Coll. Tri. et Coll. S. A. Mus.

Port Natal. Congo. Sierra Leone.—Coll. Brit. Mus.

D.—Hind-wing without appendage.

149. *Lycæna Asopus*.

Lycæna Asopus, Hpfr., *Monatsberichte d. Königl. Akad.*
[*d. Wissensch. zu Berlin*, 1855, p. 642.

„ „ Hpfr., in *Peters' Reise nach Moss.*,—
[*Ins.*, p. 410, pl. 26, f. 13, 14, 15.

♀. *Lycæna Kama*, Trimen, *Tr. Ent. Soc. Lond.*, 3rd Ser.,
[I, p. 403.

Exp. 11 lin.—1 in.

♀. Pale greyish-brown, shot from bases with bright-blue. *Fore-wing*: blue occupies discoidal cell, extending on inner-margin to beyond middle; along hind-margin a row of very indistinct, whitish-edged, dusky marks. *Hind-wing*: blue extending through cell, covering median nervules; crossing the latter is a macular, whitish fascia, reaching to second subcostal nervule; along hind-margin a row of white annulets, of which one (between second and third median nervules) encloses a black spot. *UNDER-SIDE*.—Pale brownish-grey; in both wings an imperfect white annulet, enclosing a space slightly darker than ground-colour, closes cell; a row of brownish, white-edged, confluent spots beyond middle (in fore-wing from costa to submedian nervure); a submarginal row of confluent, brownish lunules, white-edged interiorly and exteriorly (between the row of spots and that of lunules a whitish space, more conspicuous in hind-wing); followed by a row of indistinct dark spots. *Hind-wing*: a transverse row of four white-ringed black spots near base; between

* An example from the Caledon Division is beautifully intermediate in colouring and marking between the ♀s of the darker and lighter variations.

first and third median nervules two black spots, dotted with bluish-silvery, and bounded interiorly by an orange crescent,—the lower spot the smaller.

“March; not common.”—D’Urban, in litt.

The ♂ figured by Hopffer is *paler in ground-colour, but browner, without any blue suffusion*. In both sexes he describes and figures the black spot on upper-side of hind-wing as inwardly *orange-lunuled*, and notes a ♀ from Senegal in which the spot next anal angle is similarly coloured.

The under-side of this *Lycæna* presents a close resemblance to that of the much larger *L. Celeus* (type).

King William’s Town.—Coll. W. D’Urban.

“Querimba. Senegal.”—Hopffer, in Peters’ Reise.

150. *Lycæna* Jesus.

Polyommatus Jesus, *Guér., Voy. en Abyss. par Lefebvr.,*
[p. 383, t. 11, f. 3, 4. ♂.

Lycæna Jesus, *Wallgr., Lep. Rhop. Caffr.,* p. 39.

Exp. 10 lin.—1 in.

♂. *Lilac-blue, with a strong pinkish tinge; a very narrow hind-marginal blackish edging; cilia white, in fore-wing indistinctly spotted with blackish. Hind-wing: two indistinct blackish spots on hind-margin, one on either side of third median nervule. UNDER-SIDE.—Greyish-white in fore-wing, white in hind-wing, with transverse, white-edged, brownish fasciæ, and black spots: in each wing—a short, white-bordered brown streak closing cell,—a rather oblique, irregular, submacular fascia beyond middle, from costa to third median nervule,—a brownish lunulate streak, followed by a row of black spots (some indistinct),—and a blackish line on hind-marginal edge. Fore-wing: a longitudinal stripe along subcostal to beyond end of cell, black at base, thence suffused and ferruginous-brown; in cell, near extremity, a blackish, white-edged spot, touching median nervure. Hind-wing: a basal oblique black stripe; a row of four very conspicuous white-edged spots before middle, and two similar spots respectively at costal origin and inner-marginal end of macular fascia; two black spots, of upper-side, outwardly bluish-silvery-dusted, interiorly faintly orange-lunuled; base irrorated with pale-bluish.*

♀. *Dull-brownish, clouded with whitish on discs, faintly shot with bluish from bases; in each wing a distinct disco-cellular fuscous lunule, and a marginal row of spots (very*

faint in fore-wing. UNDER-SIDE.—As in ♂; but markings darker and more sharply defined.

I know nothing of the habits of this beautiful *Lycæna*, the ♂ of which may be readily known by the *pinkish* lustre of its upper-surface.

Bashee River, Kaffraria (J. H. Bowker).—Coll. S. A. Mus.
Damaraland (J. A. Bell; C. J. Andersson).—Coll. Tri.

151. *Lycæna Moriqua*.

Lycæna Moriqua, Wallgr., *Lep. Rhop. Caffr.*, p. 39.

Exp. 10 lin.—1 in.

Very nearly allied to *L. Jesous*, Guér.

♂. *Darker, more violaceous; hind-marginal border much broader, ill-defined inwardly. Hind-wing: spots obsolete, merged in border. UNDER-SIDE.—Ground-colour whiter: disco-cellular streaks blackish. Fore-wing: longitudinal stripe fainter, brownish; fascia beyond middle blackish, more distinctly macular, much less oblique; a small spot below median nervure, before middle. Hind-wing: no fascia beyond middle, but an irregular row of eight distinct black spots; bluish at base almost obsolete; two spots near anal angle faintly blue-dusted, without lunule.*

♀. *Whitish discal space smaller, less distinct, sometimes almost obsolete: blue from base sometimes strongly-marked, sometimes scarcely traceable. UNDER-SIDE.—As in ♂; but in one specimen the ground-colour is brownish-grey, the spots larger than usual, and their white rings conspicuous.*

From my descriptions of species in Mr. D'Urban's collection, it appears that the specimens referred by him to *Jesous* are actually *Moriqua*. The row of spots on under-side of hind-wing is the best distinctive character of the latter species.

"Not common: March and April."—D'Urb., in litt.

King William's Town (W. D'Urban). Butterworth, Kaffraria (J. H. Bowker).—Coll. Tri.

152. *Lycæna Ladon*.

♂. *Papilio Ladon*, Cram., *Pap. Exot.*, pl. 270, f. D, E.

Polyommatus Ladon, Godt., *Enc. Meth.*, IX, p. 677, n. [189.

Lycæna Ladon, E. Doubl., *List Lep. Brit. Mus.*, II, p. 44.

Exp. 1 in. 2 lin. (♂).

♂. *Very pale, satiny, whitish-blue: cilia whitish, spotted with grey. UNDER-SIDE.—White, with blackish spots: in*
s 2

each wing,—a thin streak closing cell,—a transverse row of spots beyond middle (in *hind-wing* very irregular and widely interrupted),—a lunulate paler streak (in *hind-wing* regularly denticulate),—and a submarginal row of dots (indistinct in *fore-wing*, slightly tinged with ochreous in *hind-wing*). *Hind-wing*: near base, a transverse row of three separate spots.

♀. “Same colour as ♂. *Fore-wing*: a rather wide, brown, *hind-marginal* border; a central black lunule. *Hind-wing*: on hind-margin, a row of brown spots.”—(Godt., loc. cit.)

The only example I have seen is the ♂ specimen in the British Museum. South Africa.—Coll. Brit. Mus.

“Cape of Good Hope.”—Cram.

153. *Lycæna Cissus*.

Polyommatus Cissus, Godt., *Enc. Meth.*, IX, p. 683.

Lycæna Cissus, Wallgr., *Lep. Rhop. Caffr.*, p. 40, n. 13.

„ Catharina, Trimen, *Tr. Ent. Soc.*, 3rd Ser., I, [p. 281.

Exp. 1 in. 1 lin.—1 in. 5 lin.

♂. *Dull violaceous-blue*; *costa* and *hind-margin* narrowly bordered with greyish-brown in both wings. *Hind-wing*: on hind-margin, between first median nervule and anal angle, from one to four bright-orange lunules, the largest between second and third median nervules, and with a round black spot touching its outer edge. Cilia whitish-grey. UNDER-SIDE.—*Whitish-grey*; ocelli-form spots blackish or black, white-ringed; in both wings a white-edged, blackish streak closing cell, a sinuate row of conspicuous ocelli beyond middle (those in *hind-wing* smaller and fainter than those in *fore-wing*), a submarginal row of ill-defined, fuscous, whitish-bordered lunules, and a single small ocellus in discoidal cell. *Hind-wing*: base dusted with blackish and bluish scales; an ocellus near base, just below subcostal nervure; orange lunules paler, black spot marked outwardly with some bluish-silvery scales.

♀. *Blue* paler, less violaceous than in ♂. *Fore-wing*: *costa*, apex, and *hind-margin* very broadly bordered with greyish-brown. *Hind-wing*: costal half of wing greyish-brown, some small outwardly whitish-edged fuscous lunules along hind-margin; orange lunules paler and larger than in ♂, more or less confluent, black spot larger. UNDER-SIDE.—Quite like that of ♂; spots larger, more conspicuous.

Common. Hill-sides, fields, and open ground.

October (m)—January (b). "September and March."—D'Urb., in litt. This handsome butterfly has a low, short flight, and frequents grassy spots. Mr. D'Urban notes it as "not common" in British Kaffraria.

Knysna. Butterworth and Bashee River, Kaffraria (J. H. Bowker).—Coll. Tri. et Coll. S. A. Mus.

King William's Town.—Coll. W. D'Urban.

South Africa.—Coll. Brit. Mus.

"Cape of Good Hope."—Godart.

154. *Lycæna Niobe*.

Lycæna Niobe, *Trimen, Tr. Ent. Soc.*, 3rd Series, I,
[p. 282.]

Allied to *L. Cissus*, Godt.

Exp. 1 in. 2 lin.—1 in. 5 lin.

♂. *Dull cupreous-violaceous*; base purplish, and hind-margin rather widely bordered with reddish-brown in both wings; spotless; *cilia* brownish in fore-wing, but white at apex, in hind-wing brownish, with white tips throughout. UNDER-SIDE.—*Dusky brownish-grey*; ocelliform spots black, with pale-grey rings, arranged as in *L. Cissus*, but no ocellus in discoidal cell of fore-wing, and the outer row of spots hardly visible on either wing; space between the two rows marked by a hoary-greyish band; close to hind-margin, a row of very indistinct, darker, lunular spots. *Hind-wing*: between second and third median nervules, close to hind-margin, a narrow, blackish dot, tipped with ferruginous internally, with greyish-blue externally; row of ocelli interrupted, in one specimen nearly obliterated.

♀. *Violet brighter and better defined than in ♂*, forming a patch on inner-marginal half of both wings, rising very little above median nervure, and extending a little beyond middle. UNDER-SIDE.—As in ♂; spots more conspicuous, especially that between second and third median nervules of hind-wing, in which the ferruginous and blue colouring is distinct.

Readily distinguished from *Cissus* by its sombre colouring and lack of orange lunules in hind-wing. Mr. Bowker has forwarded a few examples from Kaffraria, differing to some extent from the above description, the ♂s being of a purer violet, and the ♀s wholly brown (without a tinge of violet) on the upper-side.

Rare. Hill-sides.

October (m) and March (m).

I only took three specimens of this *Lycæna* during my stay at Knysna. When on the wing their flight and dark colouring gives them much the aspect of many of the *Satyridæ*.

Knysna. Bashee River, Kaffraria (J. H. Bowker).—
Coll. Tri. et Coll. S. A. Mus.

155. *Lycæna Messapus*.

Polyommatus Messapus, *Godt., Enc. Meth.*, IX, p. 682.

♂. *Lycæna Acca*, *Westw., Doubl., Westw., Hewits., Gen.*
[*Diurn. Lep.*, pl. 76, f. 1.

Lycæna Messapus, *Wallgr., Lep. Rhop. Caffr.*, p. 41.

Exp. 8 lin.—1 in.

♂. *Blue-violaceous*, with a narrow blackish hind-marginal border: cilia greyish, whitish externally. *Hind-wing*: a hind-marginal spot between second and third median nervules (sometimes nearly obsolete), usually inwardly edged by an orange lunule. *UNDER-SIDE*.—*Pale brownish-grey*: in each wing,—a streak closing cell (in fore-wing blackish, in hind-wing of the ground-colour) whitish-edged on both sides,—a row of white-ringed spots beyond middle (in fore-wing blackish, in hind-wing of the ground-colour and confluent except the first and rarely the second spot),—and two rows of faint-whitish lunules (separated by darker marks) of which the outer forms annulets with a whitish hind-marginal line. *Hind-wing*: four white-ringed dark spots before middle,—one (usually the most conspicuous) between costal and subcostal nervures, one in cell and two on inner-margin; hind-marginal black spot usually whitish-ringed and often orange-lunuled,—sometimes obsolete; row beyond middle angulated.

♀. *Glistening greyish-brown*: very rarely with a few blue scales near bases. *Hind-wing*: besides hind-marginal spot (which is very rarely indistinct) a row of indistinct pale annulets is usually visible. *UNDER-SIDE*.—As in ♂, markings more distinct.

In some specimens, of both sexes, the markings are very faint beneath, and the ground-colour duller and slightly darker than usual.

Very common. Open ground, rough fields, &c., in grassy spots.

Throughout the year.

This elegant little "Blue" is abundant about Cape Town, and will be one of the first taken by the collector. On fine winter days it is one of the few butterflies that enliven the scene. The ♀ is not unlike the European *L. Alsus*, W. V. Mr. D'Urban found it "rare" at King William's Town, but it does not seem to be uncommon in Kaffraria Proper.

Cape Town. Caledon (J. X. Merriman). Knysna. Plettenberg Bay.—Coll. Tri.

King William's Town.—W. D'Urban.

Butterworth and Bashee River, Kaffraria (J. H. Bowker).—
Coll. S. A. Mus.

South Africa.—Coll. Brit. Mus.

156. *Lycæna Knysna*.

Lycæna Knysna, *Trimen, Tr. Ent. Soc.*, 3rd Series, 1, [p. 282.]

Allied to *L. Messapus*, Godt.

Exp. 10 lin.—11 lin.

♂. Dull-violet, with a silky gloss; hind-margin of both wings rather widely bordered with blackish; cilia broad, whitish. *Fore-wing*: costa very narrowly edged with a white line. *UNDER-SIDE*.—*Whitish-grey*; ocelli blackish, whitish-ringed; in both wings a sinuate row of ocelli beyond middle, a whitish-edged fuscous streak closing discoidal cell, a distinct ocellus in cell (sometimes an indistinct ocellus below it), two submarginal rows of pale-fuscous, indistinctly whitish-edged, lunular spots,—and a thin blackish edging line, interiorly faintly whitish-edged. *Hind-wing*: three minute ocelli near base, forming with that in discoidal cell a short row across wing; base blackish-dusted.

♀. *Shining greyish-brown*; inner-marginal area of both wings more or less *dusted with violet-blue from base*. *Fore-wing*: a fuscous line closing discoidal cell. *UNDER-SIDE*.—Quite similar to that of ♂, but all the spots more conspicuous, especially the marginal lunular rows. *Fore-wing*: spot below that in discoidal cell always present, often distinct.

A specimen of the ♀ (taken in copulâ) in my collection is darker on upper-side than usual, with faint-bluish marking, and with two or three faint-fuscous, outwardly whitish edged spots near anal angle: the under-side much darker and browner; the spots larger, blacker, conspicuously white-edged, as are also the rows of marginal lunules; hind-wing with an additional ocellus at base, a *longitudinal, conspicuous, whitish dash from disco-cellular streak to inner row of lunules*, of which row the three next anal angle are black. Mr. W. S. M. D'Urban has met with precisely similar specimens in very distant localities, so that it would seem to be a permanent variety of the female.

Both sexes are readily distinguished from *Messapus*, Godt., by the paler and more conspicuously-spotted under-side and whiter cilia; and the ♂ by its more violet upper-side, with dark margins, four times as broad as those of the ♂ *Messapus*. The orange lunule inwardly bordering a black spot near anal angle of hind-wing, often so conspicuous in both sexes of *L. Messapus*, is never found in *Knysna*. The ♂ bears considerable resemblance above to the ♂ *L. Egon*, W. V.

Local. Waste ground and gardens.

February (m)—April (b). "September and June."—D'Urb.

A stubble-field was the favourite haunt of this species at Plettenberg Bay. I have only taken a single specimen at Cape Town; it was on flowers in the Botanic Garden. Specimens from Ceylon in Mr. Layard's collection do not differ from South African examples.

"Graham's Town. King William's Town. Keiskamma River, near Bodiam."—W. D'Urban, in litt.

Cape Town. Knysna. Plettenberg Bay.—Coll. Trī.
 Cape of Good Hope. Interior of South Africa.—Coll.
 Brit. Mus.

Ceylon.—Coll. E. L. Layard.

“Calcutta (Coll. Brit. Mus.); North India (Coll. W. C. Hewitson).”—D’Urban, in litt.

157. *Lycæna Trochilus*.

Lycæna Trochilus, *Friv. & Herr.-Sch., Schmett., f.*
 [224—226.

“ „ „ *Gerh., Lycænen*, t. 16, f. 3.

♀. Exp. 9 lin.

Dark-brown; cilia greyish-white. *Hind-wing*: between discoidal nervule and anal angle, three to four hind-marginal black spots, inwardly bordered by *broad, contiguous, orange lunules*. *UNDER-SIDE*.—*Brownish-grey*: pattern of markings very like that of *L. Knysna* (especially the variety of the ♀). *Fore-wing*: *no spots* before lunule closing cell; row of spots beyond middle not so curved costally; submarginal lunules and white edging of marginal line more conspicuous. *Hind-wing*: row of spots beyond middle less acutely-arched, *only the first and last black*, the others being filled with the ground-colour; *orange lunules broad, confluent*, suffusing the black spots, which are outwardly brilliantly gold-dusted, inwardly faintly whitish-edged; row of spots near base larger, more conspicuous.

The synonymy is taken from Wallengren. I am unacquainted with the ♂, which is not described by Wallengren. The orange lunules and gilded spots of under-side readily distinguish the species from *L. Knysna* and *L. Lysimon*.

Bashee River, Kaffraria (J. H. Bowker).—Coll. Tri. et Coll. S. A. Mus.

Turkey.—Coll. Brit. Mus.

158. *Lycæna Lysimon*.

Papilio Lysimon, *Hübner, Eur. Schmett.,—Pap., t. 105,*
 [f. 534—5.

Polyommatus Lysimon, *Godt., Enc. Meth., IX, p. 701.*

Lycæna Lysimon, *E. Doubl., List Lep. Brit. Mus., II,*
 [p. 47.

Argus Lysimon, *Boisd., Faune de Mad., &c.*, p. 23.

Lycæna Gaika, *Trimen, Tr. Ent. Soc.*, 3rd Series, I,
[p. 403.]

Exp. 8—10½ lin.

♂. *Pale-blue; a brownish-grey border of variable width on hind-margins; cilia whitish. UNDER-SIDE.—Whitish-grey; with minute, whitish-ringed, blackish spots; in both wings a thin, greyish, whitish-edged mark closing discoidal cell; a transverse row of spots beyond middle (that of fore-wing curved, commencing with two minute spots on costa before middle, and reaching to submedian nervure; that of hind-wing sharply angulated, composed of eight spots, from costa about middle to inner-margin); two dentate, submarginal, lunular, greyish, whitish-edged lines; and a thin, black, bounding line immediately within cilia. Hind-wing: a basal black spot; before middle a transverse row of three spots; no metallic-centred spots near anal angle.*

♀. *Dull-brown. UNDER-SIDE.—As in ♂: spots more distinct.*

Since learning that *Lysimon* was found in South Africa, I have seen no authentic specimens of the species; but, after a careful investigation of the descriptions within my reach, have come to the conclusion that the insect described by me in the Entomological Transactions under the name of *Gaika* is really the ♂ of *Lysimon*. This species is of very slender structure, and has more elongate wings than most of the *Lycænæ*. The under-side markings much resemble those of *L. Knysna* mihi, but are thinner and more distinctly white-edged, the row of spots beyond middle being much more sharply curved. None of the seven specimens I have seen possess any spots on under-side of fore-wing between base and discoidal lunule; but Godart states that he has seen examples in which the two spots were obsolete, and Wallengren makes no mention of these spots in his description.

"March 30th, 1861."—D'Urb., in litt.

King William's Town.—Coll. W. D'Urban.

Bashee River, Kaffraria (J. H. Bowker). Damaraland (Mrs. Latham).—Coll. Tri. et Coll. S. A. Mus.

Ceylon.—Coll. E. L. Layard.

South Europe.—Coll. Brit. Mus.

"Cape. Quirimba. Senegal. Egypt. Spain. Portugal. Madagascar. East Indies."—Hopffer, in Peters' Reise.

159. *Lycæna Mahallokoæna*.

Lycæna Mahallokoæna, *Wallgr., Lep. Rhop. Caffr.*, p.
[41, n. 16.]

Exp. 11 lin.—1 in.

♂. *Blue-violaceous* (nearly as in *L. Aquilo*, Boisd.): *whole disc and submedian nervure of fore-wing fulvous-yellow, disc*

of hind-wing more or less irrorated with the same colour; a very thin hind-marginal fuscous edging. *Fore-wing*: fulvous-yellow radiating outwardly (but rays not reaching hind-margin), and sometimes marked by a very faint fuscous line at end of discoidal cell. *Hind-wing*: on hind-margin, near anal angle, two or three fulvous lunules, of which the middle one is marked with a large black or violaceous-black spot, externally more or less white-edged. UNDER-SIDE.—*Whitish-grey*: in each wing, a pale-fuscous, white-edged, disco-cellular line or lunule, a row of spots (quite as in *Messapus*, Godt.) of the same colours beyond cell, and on hind-margin a row of faintly white-edged, pale-fuscous lunules with adjacent spots of the same colour. *Fore-wing*: six spots in row beyond cell. *Hind-wing*: first spot in row beyond cell costal, black; row abruptly interrupted on second subcostal and third median nervules, so that the two first spots are distant from the rest,—last spot, also remote from rest, minute, lunular, about middle of inner-margin; two black, white-edged spots at base, one on costa, the other in cell; sometimes a third, very minute spot on edge of inner-margin; two lunules in hind-marginal row fulvous, the inner one with an adjacent large violaceous-black spot.

♀. *Fuscous*. *Hind-wing*: near anal angle two or three large, confluent, fulvous spots, the inner marked with a black, the outer with a fuscous spot, both outwardly white-edged; a white line at anal angle. UNDER-SIDE.—Quite like that of ♂.

Translated from Wallengren's description. I have never seen this singularly-coloured species.

Kaffraria (Wahlberg).”—Wallgr.

Genus CHRYSOPHANUS.

Chrysophanus, Hübn., Westw., &c.

Polyommatus, Boisd.

Lycæna, Steph.

IMAGO.—General characters of *Lycæna*. *Eyes* smaller, less prominent; *antennæ* rather shorter and stouter. *Thorax* *abdomen*, and *legs* as in more robust species of *Lycæna*. *Hind-wings* not tailed on third median nervule (where, however, there is sometimes a short dentation), but usually with a more or less marked projection at anal angle.

There is little besides colour to distinguish the insects of this Genus from *Lycæna*, except the anal-angular prominence

of hind-wing, which, however, is not found in *C. Orus*. The burnished red surface of the wings has acquired for these insects the name of "Coppers" in England. *C. Lara* may be known by its pale-ferruginous colour and peculiar ocellated spots near anal angle of both wings.

160. *Chrysophanus Orus*.

Papilio Orus, *Cram.*, *Pap. Exot.*, pl. 332, f. E, F.

„ *Arcas*, *Fab.*, *Mant. Ins.*, II, p. 80, n. 728.

Hesperia „ „ *Ent. Syst.*, III, 1, p. 311, n. 279.

Polyommatus Orus, *Godt.*, *Enc. Meth.*, IX, p. 672, n. 172.

„ „ *Wallgr.*, *Lep. Rhop. Caffr.*, p. 42, n. 1,

Exp. $10\frac{1}{2}$ lin.—1 in. 2 lin.

♂. *Metallic orange-red, with a blue-violaceous lustre; a narrow, blackish hind-marginal edging, and some black discal spots; bases slightly dusky. Fore-wing: a lunule closing cell; usually a small spot in cell; beyond middle an irregular row of six or seven spots between costa and submedian nervure; a black linear costal edging, abruptly widening into a broad apical border, which again grows gradually narrower along hind-margin to anal angle. Hind-wing: markings as in fore-wing, but inner-edge of hind-marginal border indented on nervules, and spots more minute (those of transverse row being sometimes partly—in one specimen wholly—wanting); no spot in cell. UNDER-SIDE.—Hind-wing and border of fore-wing brownish-grey. Fore-wing: spots as above, but larger and with pale edging; an additional spot in cell, near base; along inner edge of hind-marginal grey a row of linear blackish lunules, most distinct near inner-margin. Hind-wing: spots as above, but scarcely darker than ground-colour, only marked by their pale rings; a transverse row of three minute black spots near base, and a little beyond them a row of three larger paler spots; submarginal row of lunules continued across this wing, tinged with ferruginous. Cilia brownish, tipped with white.*

♀. *Similar, but duller, and without violaceous lustre; basal suffusion and blackish borders wider, darker (especially in hind-wing); spots larger, all distinct. UNDER-SIDE.—As in ♂.*

Common. Hill-sides and waste ground.

March (c)—December (m).

This brilliant *Chrysophanus* is very frequently to be met with at the base of Table Mountain on the Cape Town side, but it is much scarcer on the other side of the mountain. It has the habits of the tail-less *Lycanæ*, but is a more active insect; it is fond of settling on the ground, where it suns itself with its wings expanded.

Cape Town. Stellenbosch. Graham's Town (H. I. Atherstone).—Coll. Tri.

"Graham's Town to King William's Town."—D'Urban, in litt.

Butterworth and Kei and Bashee Rivers, Kaffraria (J. H. Bowker).—Coll. S. A. Mus.

South Africa.—Coll. Brit. Mus.

161. *Chrysophanus* Lara.

Papilio Lara, *Linn., Syst. Nat.*, II, p. 791, n. 238.

" " " " *Mus. Lud. Utr. Reg.*, p. 320, n. 138.

Hesperia " *Fab., Ent. Syst.*, III, 1, p. 315, n. 191.

Papilio Iolaus, *Cram., Pap. Exot.*, pl. 270, f. F, G.

" *Gorgias*, *Stoll, Suppl. Cram. Pap. Ex.*, pl. 33, f. [5, 5d.

Polyommatus Lara, *Godt., Enc. Meth.*, IX, p. 675, n. 179.

Zeritis (?) Lara, *E. Doubl., List Lep. Brit. Mus.*, II, [p. 57.

Thecla Iolaus, and *Thecla* Lara, *Wallgr., Lep. Rhop.* [Caffr., pp. 34, 35.

Exp. $8\frac{1}{2}$ lin.—1 in. 3 lin.

Glistening pale-ferruginous, darker on margins, with a brilliant-pearly basal lustre. Fore-wing: at anal angle, a good-sized white-ringed black spot, often surmounted by one or two indistinct white rings, of which the lower is sometimes distinct and filled with black. *Hind-wing*: at anal angle two spots like those of fore-wing, but smaller; above them, along hind-margin, a series of whitish rings, becoming obsolete towards costa; beyond middle, occasionally an indistinct transverse row of whitish lunules. Cilia white, spotted with fuscous. UNDER-SIDE.—*Whitish-grey. Fore-wing*: tinged with brownish, except on costa and hind-margin; anal-angular spots distinct, whitish rings above suffused, all interiorly edged by a brownish line; a pale-edged disco-cellular streak; beyond middle, a macular, brownish, transverse, outwardly white-edged streak, sharply curved at costa. *Hind-wing*: disco-cellular streak and streak about middle (much sinuated) usually indistinct; no spots at anal angle or on hind-margin; an irregular, submarginal, suffused brownish fascia, broadest on discoidal nervule; near base two or three indistinct spots.

This species is extremely variable in outline of wings, those of the ♂ being much pointed and elongated (the fore-wing at apex, the hind-wing at anal angle) in specimens from Kaffraria, which are also remarkable for the

width and brightness of the basal lustre.* The ♂s found near Cape Town have sharper wings than the ♀s. Stoll's *Gorgias* is figured from an acute-winged example, and Wallengren has followed him in considering Cramer's *Iolaus* as distinct, but the two are indubitably identical, and synonymous with Linné's *Lara*. Much as this butterfly differs in pattern from the typical *Chrysophani*, its structure shows it to be truly one of them; and the under-side markings are mainly a modification of those common to the Genus.

Local. Broken rocky ground at base and on ascent of mountains. Not infrequent in certain seasons.

October (m)—December (m); February (b)—April (e); June (m)—August (b).

This delicately-marked little species has quite the habits of *C. Orus*, but occurs at a much greater elevation than I ever observed the latter to haunt. It often settles on stones.

Cape Town. Stellenbosch. Caledon (J. X. Merriman).—Coll. Tri.

Graham's Town.—Coll. H. I. Atherstone.

King William's Town.—Coll. W. D'Urban.

Butterworth and Bashee River, Kaffraria (J. H. Bowker).—Coll. S. A. Mus.

Cape of Good Hope.—Coll. Brit. Mus.

Genus ZERITIS.

Zeritis, *Boisd.*, *Blanch.*, *E. Doubl.*

Cigaritis, *Boisd.*, *Lucas.*

IMAGO.—Robust in general structure. *Head* rather wide: *eyes* smooth (hairy in *Z. Alphæus*); *palpi* long, or very long, compact, separate throughout their length, densely scaled (but scarcely hairy) beneath, the middle and terminal joints often longer in ♀ than in ♂, the latter joint always very distinct, slender, acuminate; *antennæ* of variable form, generally rather short, never abruptly incrassate and usually very gradually so from before middle or even from base. *Thorax* long and usually very stout. *Fore-wings* usually more or less pointed at apex or elbowed below apex (chiefly in ♂); hind-margin sometimes slightly dentate; costa nearly straight or slightly hollowed about middle. *Hind-wings* usually more or less produced and pointed at anal angle, and occasionally with a projection at end of third median nervule; hind-margin more dentate than in fore-wing. *Legs* stout, thick, scaly: femora sometimes pilose; fore-tarsi of ♂ much atrophied, consisting apparently of one long joint terminating in a single curved unguis.

This Genus, which includes some very beautiful butterflies, is chiefly South African, only two species being recorded

* The ordinary blunt-winged examples are also found in Kaffraria.

from North Africa. While some of the species, such as *Zeuxo*, *Chrysaor*, &c., show a decided affinity to *Chrysophanus*, others, by their robust bodies and dull colouring, seem to approach the *Hesperidæ*. *Thero*, *Thyra*, and *Pierus* have the antennæ very gradually thickened, but in the more metallic species the club, though gradually formed, is distinct. In *Protumnus* (rather a doubtful member of this Genus), the antennæ are remarkably short and stout. All the species have the wings coloured above with some shade of red or orange, with dark borders and (usually) spots: in *Thero*, however, the ground is brown and the spots orange. There is great uniformity in the arrangement of the spots, especially on the under-side, species spotless above presenting (except *Alphæus*) the generic pattern beneath, with metallic or bright-white centres to the spots of fore-wing, and numerous metallic dots and markings on hind-wing. The borders of fore-wing and the ground of hind-wing on under-side are invariably of the same hue, usually of some shade of ochre, which, in several species, is often replaced by a rich vinous or lake tint.

The metallic-coloured species have much the same habits and flight as *Chrysophanus*, but the duller and heavier-made fly very like *Hesperidæ*, and continually settle on the bare ground.

162. *Zeritis Zeuxo*.

Papilio Zeuxo, Linn., *Syst. Nat.*, II, p. 789, n. 231.

„ „ „ *Mus. Lud. Ulr. Reg.*, p. 331,
[n. 149.]

Hesperia Zeuxo, Fab., *Ent. Syst.*, III, 1, p. 314, n. 289.

Polyommatus Zeuxo, Godt., *Enc. Meth.*, IX, p. 672, n.
[173.]

Zeritis Zeuxo, Doubl., *Westw.*, *Hewits.*, *Gen. D. Lep.*

Exp. 1 in. $\frac{1}{2}$ lin.—1 in. $1\frac{1}{2}$ lin.

Metallic golden-orange, with a slight basal fuscous suffusion, and spotted with black: a hind-marginal blackish border, broad and even in fore-wing, narrow and dentated in hind-wing. Fore-wing: a small spot in cell; an elongate spot closing cell, with a small costal spot a little above and beyond it; an irregular discal transverse row of seven spots, of which the first three are usually confluent, and the two last (just above submedian nervure) rarely so: costa slightly fuscous-clouded; usually a dot before middle below cell. Hind-wing:

spots similarly arranged, but none in cell or just below it; a submarginal row of lunular spots near costa confluent with hind-marginal border; costa and inner-margin fuscous-clouded. **UNDER-SIDE.**—*Hind-wing and border of fore-wing* (except inner-margin) *brownish-grey*. *Fore-wing*: yellowish-orange, not metallic; an additional dot on costa before middle, and another in cell at base; all spots above median nervure and its first branch centred with glistening-steely; spot below cell large; a very faint submarginal row of spots, the two about its middle dimly steely-scaled. *Hind-wing*: spots indistinct, but little paler than ground-colour, indicated by their dark edges; a row of three before middle; two indistinct lunular submarginal streaks.

The ♀ has rather more basal suffusion, and is slightly less metallic above.

I have had considerable difficulty in determining whether the specimens just described or those of the following species (which I have named *Chrysaor*) were truly referable to Linné's *Zeuxo*. The description in "Museum Ludovicæ, &c.," applies excellently to both, with the single exception of the words "*marginè undique lato nigro*," which are certainly not applicable to any one of the numerous specimens of *Chrysaor* that I have examined. From the descriptions I made in the British Museum, I imagine that both species are included under *Zeuxo* in the National Collection.

Local. Bushy spots in hilly situations.

October (e)—January (b).

Flies higher than other *Zerites*; fond of settling on tall shrubs. Usually singly, or in pairs. The only place in which I have seen the species at all common is a rough waste field among the fir plantations at the back of Newlands, on the ascent of Table Mountain. I have received no specimens from any other part of South Africa.

Cape Town.—Coll. Tri.

163. *Zeritis Chrysaor*.

Zeritis Chrysaor, mihi. N. Sp.

Allied to *Z. Zeuxo*.

Exp. 10 lin.—1 in. 1 lin.

Glittering golden-orange: spots as in *Zeuxo*, but usually smaller and more distinct (the submarginal row of hind-wing always wanting); hind-marginal border much narrower (in *fore-wing* widest at apex, in *hind-wing* macular or nearly so, being sharply indented on nervules). *Hind-wing*: a dot or short linear mark at end of cell; no costal clouding. **UNDER-SIDE.**—*Hind-wing, and costa at base with apical region of fore-wing, varying from pale creamy-ochreous to pale ferruginous-ochreous*. *Fore-wing*: spots arranged as in

Zeuxo, but filled with more glittering silvery,—the whole (except dots of submarginal row) usually metallic-centred, but sometimes only those near costa. *Hind-wing*: spots small, slightly glistening, arranged as in *Zeuxo*, but less distinct; on hind-margin of paler specimens some ferruginous clouding. Anal-angular projection of hind-wing more acute than in *Zeuxo*.

This species appears to be much more widely distributed than its near ally, occurring from Cape Town to the Bashee River. It is the *most metallic* of the group. The few specimens I have met with near Cape Town only occurred on mountain sides, usually at a considerable elevation. The fore-wings of the ♂ are more prominent at apex, and those of the ♀ more convex on hind-margin than in *Zeuxo*, and they possess no spot in, or just below, cell.

February (e). April (e). "September, October, March, and June."—W. D'Urban, in litt.

Cape Town. Muizenberg. Swellendam (L. Taats).—Coll. Tri.

"Port Elizabeth. Keiskamma River, near Bodiam. King William's Town."—W. D'Urban, in litt.

Kei and Bashee Rivers, Kaffraria (J. H. Bowker).—Coll. S. A. Mus.

164. *Zeritis Pyroeis*.

Zeritis Pyroeis, mihi. N. Sp.

Exp. 1 in.—1 in. 4 lin.

Allied to *Z. Zeuxo*, Linn.

Orange-yellow, smooth but not metallic, with black spots; base of both wings broadly blackish and densely blue-scaled; hind-wing of ♂ richly shot with a shifting blue lustre. Fore-wing: costa and hind-margin bordered with black; costal border broadest near base, where it is powdered with fulvous-ochreous,—hind-marginal border very regular, of even width, very slightly crenelated on inner edge; just beyond basal clouding a small round spot in discoidal cell, a longer quadrate spot closing cell; beyond middle an irregular row of six spots, of which the three first form a continuous costal stripe, the fourth is nearer base, the fifth in a line beneath the three first, and the sixth (above submedian nervure) in a line beneath the fourth. *Hind-wing*: a row of six spots as in fore-wing, except that the three first spots are more separate,—in ♂ the first spot is almost merged in costal blackish band, which is wider than in ♀; on hind-margin a row of black arches (sharper in ♂) intersecting the ground-colour between nervules, which carry the orange to edge;

closing cell is a black streak usually merged with basal clouding. Cilia fuscous mixed with white: in hind-wing mingled with red. UNDER-SIDE.—*Costa and apex of fore-wing and whole of hind-wing pale creamy-ferruginous*; no basal clouding. *Fore-wing*: two cellular spots and first spot of transverse row silver-centred; a third black dot in cell, and another (silver-centred) on costa beyond cell; beneath central spot of cell a good-sized rounded spot below submedian nervure; close and parallel to hind-margin a row of fuscous spots, indistinct near costa. *Hind-wing*: often almost spotless; a pale glistening line closing cell; near it, towards inner-margin, a pale dot; a submarginal row of pale dots, sometimes replaced by a faint reddish line: transverse row sometimes represented by spots barely distinguishable from ground-colour except by their fusco-ferruginous outlines.

From its allied congeners, *Z. Zeuxo* and *Z. Chrysaor*, mihi, this species is at once distinguished by its blue-glistening basal patches; while its entire outline of wings and plainly-tinted under-surface preclude its being mistaken for the angulated *Z. Thysbe*, Linn. In the two species first-named, also, the ground colour is metallic, strikingly so in *Chrysaor*.

Sandy spots in level country. October (e)—December (m). February (h). Not common.

I first met with this very beautiful *Zeritis*, interesting from its relations to the three species just mentioned, on the sand flats near the coast of False Bay, a few miles from Wynberg, in October, 1861. I have since taken it in other parts of the Flats, usually settling on spaces of white sand, or on the low plants that fringe such arid spots. I only once took a specimen at a little distance from the Flats, on a hill-side at Wynberg.

Cape Town.—Coll. Tri. et Coll. S. A. Mus.

165. *Zeritis Thysbe*.

Papilio Thysbe, Linn., *Syst. Nat.*, II, p. 789, n. 228.

„ „ „ *Mus. Lud. Ulr. Reg.*, p. 330, n. 148.

„ *Nais*, *Cram.*, *Pap. Exot.*, pl. 47, f. D, E.

Hesperia Nais, *Fab.*, *Ent. Syst.*, III, 1, p. 292.

Polyommatus Nais, *Godt.*, *Enc. Meth.*, IX, p. 663.

Nais splendens, *Sws.*, *Zool. Illustr.*, 2nd Ser., III, pl. 136.

Var.—*Papilio Palmus*, *Cram.*, op cit., pl. 341, f. F, G.

„ „ *Herbst, Ins.—Schmett.*, X, pl. 284,
[f. 1, 2.

Exp. 1 in.—1 in. $2\frac{1}{2}$ lin.

♂. *Orange, slightly glistening but not metallic, with brilliant silvery-blue gloss from bases; spotted and margined with black. Fore-wing*: blue completely covering basal half of wing, extending obliquely from costa at end of cell to, or

nearly to, anal angle; cellular spot and discal row as in *Pyroeis*, but the spots squarer; a rather wide black costal border from end of cell to apex, marked with three white dashes between nervules; joining it, a hind-marginal border of variable width, sometimes entire up to cilia, but often with an external lunulate orange edging. *Hind-wing*: blue not extending beyond discal row of spots, which are arranged as *Pyroeis*; costal and hind-marginal border very much narrower than in fore-wing, its latter portion often reduced to a row of dots at ends of nervules; anal-angular projection long and rather acute. Cilia white, interrupted with blackish mixed with orange on dentations of margin. **UNDER-SIDE.**—*Fore-wing*: orange-yellow; costa narrowly, apex broadly, hind-margin rather widely bordered with pale creamy-ochreous, the nervules crossing border being ferruginous, with short white dashes from margin between them; spots as in *Pyroeis* (occasionally two first of discal row silvery-centred); submarginal streak as in *Pyroeis*, of variable intensity. *Hind-wing*: pale brownish-ochreous, clouded with darker-brownish, and spotted with silvery *litræ* edged with ferruginous; two elongate *litræ* between costal and subcostal nervures,—another (sometimes like a V reversed) closing and piercing far into cell,—occasionally a small silvery dot below this mark,—and a discal row of three double ones, very singularly shaped (more or less resembling reversed Ws); hind-margin varied as in fore-wing. No black in cilia.

♀. Wings more rounded, not so dentate. Similar to ♂, but *blue of much less extent and duller*, being mixed with blackish; ground-colour rather paler and duller; spots larger. **UNDER-SIDE.**—As in ♂.

Var. ♂ and ♀ (*Palmus*, Cram.). *Without any trace of blue gloss* (except, perhaps, a few bluish hairs on a narrow basal black suffusion, which extends along greater part of inner-margin of *hind-wing*); ground-colour redder, more glistening. **UNDER-SIDE.**—As in typical specimens, perhaps a little darker.

I possess a very interesting ♂ of the Variety, taken near Cape Town, which has a faint but distinct blue lustre over the basal region of hind-wing but is in every other respect completely *Palmus*. Some typical specimens from Kaffraria show a very pale under-surface of hind-wing, the brown clouding much tinted with bright-ferruginous, and the silvery markings broad and blunted. From what I know of the distribution and localities of the species, *Palmus* appears to be a distinct race. Near Cape Town, where *Thysbe* proper does not occur, *Palmus* is by no means uncommon; at Knysna both forms are found, but *Thysbe* proper is very much the rarer; while in Kaffraria, on the contrary, *Palmus* does not seem to exist, but *Thysbe* (slightly differing from the Western examples) is often met with.

Thysbe occurs as far West as Caledon.* I anticipate information on the subject as regards portions of the intermediate ranges of country, which will probably further elucidate this point.

Sandy hill-sides and broken ground, chiefly near the sea.

September (m)—April (e).

Nothing can exceed the brilliant beauty of a blue-glossed specimen of this exquisite little butterfly, as it settles in the bright sunlight on the white sand, or on the deep-green fleshy leaves of the *Mesembryanthemum*. My first introduction to *Thysbe* took place at Mossel Bay on the 20th September, 1858, and there was never a more decided case of "love at first sight." The species was very numerous there on the sand-hills near the beach, but I regret to state that I only captured three specimens, expecting to see a like profusion at Knysna. At the latter place I only beheld three *Thysbe* proper in the space of nine months! This mournful case should prove a warning to collectors of natural objects never to overlook a species because, on their first encountering it, it appears abundant. Many animals and plants are so local that years may elapse before a second opportunity of obtaining specimens occurs.

Caledon (J. X. Merriman). Mossel Bay. Knysna. Bashee River, Kaffraria (J. H. Bowker).—Coll. Tri. et Coll. S. A. Mus.

South Africa.—Coll. Brit. Mus.

Var. Palmus, Cram.

Cape Town. Paarl. Breede River (L. Taats). Knysna. Plettenberg Bay.—Coll. Tri.

South Africa.—Coll. Brit. Mus.

166. *Zeritis Perion*.

Papilio Perion, *Cram., Pap. Exot.*, pl. 373, f. B, C.

„ „ *Herbst, Nat. Bek. Ins.—Schmett.*, pl. 286,
[f. 5, 6.

Polyommatus Perion, *Godt., Enc. Meth.*, IX, p. 645, n.
[103.

Aphnæus Perion, *E. Doubl., List Lep. B. Mus., App.*,
[p. 36.

Chrysorychia Tjoane, *Wallgr., Lep. Rhop. Caffr.*, p. 44.

Zeritis Cræsus, *Trimen, Tr. Ent. Soc.*, 3rd Ser., I, p. 283.

Chrysophanus Perion, *Hpfr., in Peters' Reise nach Moss.*,
[pl. 26, f. 1—3.

Exp. 11 lin.—1 in. 3 lin.

♂. *Red, inclining to orange, not brilliant; with shining brown-blackish margins. Fore-wing*: base suffused with brown-blackish; border wide along costa and hind-margin, and very broad in apical region (almost reaching extremity of

* Taken at Vogel Vley, Tulbagh Division (October, 1863). This locality lies about sixty miles to the North-West of Caledon.

discoidal cell); two spots in cell, and a quadrate one closing it, all touching costal border, and dark-brown; two similar spots between second and third median nervules, one just beneath extremity of cell, the other more or less incorporate with hind-marginal border (a spot above, and rarely another below, this latter spot, touching it, sometimes separable from border); cilia narrow, white, interrupted with brown. *Hind-wing*: costa from base widely, hind-margin very narrowly, bordered; a fuscous streak closing cell; a sub-marginal row of blackish lunular marks, more or less distinct; *anal angle prominently lobed*, ferruginous-red, marked with a gilded dot, bearing a short, slightly-twisted, acute tail of the same hue, white-tipped, on submedian nervure; cilia mingled greyish and ferruginous. **UNDER-SIDE.**—*Fore-wing*: dull orange-yellow, very pale on inner-margin; border varying from cinereous to ferruginous-brown; spots in and bordering discoidal cell, transverse row of spots beyond middle, and row of dots on costa, all with large, brilliant, greenish-golden centres; below median nervure, a large, dull-black, whitish-centred, often gold-dotted spot; a whitish, gold-dusted streak along bend of costal edge at base; a submarginal row of golden dots, sometimes indistinct. *Hind-wing*: varies in tint like border of fore-wing; three transverse rows of small golden spots, some of which are indistinct, the middle row including a golden streak closing cell; a dark-brown, transverse shade near hind-margin, ending on inner-margin with a golden streak, and often marked externally with some indistinct golden dots; a pale hind-marginal edging becomes golden near anal angle.

♀. *Dull orange-yellow; brown borders paler, narrower.* *Fore-wing*: base more widely suffused with brown, mingled with ochreous; apical border not half as wide as in ♂; spots in and about cell larger; beyond middle, a zigzag row of small, quadrate, brown spots across wing. *Hind-wing*: base dark-brown to extremity of discoidal cell; costa broadly bordered; hind-margin edged with a brown line; submarginal lunular row well marked, the lunules contiguous; a more or less incomplete row of small spots a little beyond middle, like that in fore-wing. **UNDER-SIDE.**—Quite like that of ♂; rather paler; spots larger, the gilding slightly paler but not less brilliant.

Antennæ, in both sexes, marked beneath with a conspicuous, broad, white bar, just at the base of the club.

Cramer's figures of this species are very unsatisfactory, especially that of the upper-surface, which, apparently representing a ♂, shows two dentate, strongly-marked black stripes crossing both wings before middle, with the

tails of hind-wings thrice as long as in nature. Indeed, so unlike the insect are these figures, that it was long before I could persuade myself not to adopt Wallengren's name of *Tjoane* for the species: but, after very carefully examining Cramer's figure of the under-side in comparison with a number of specimens, I have concluded that the figures must have been *meant* to delineate the African species just described, and not some strange Lycænid from "Surinam," the locality given by Cramer. It is worth mention, in connection with this, that Wienker's figures, in Peters' "Reise," of Mozambique examples, show much longer tails, in both sexes, than I have seen in any South African specimens. Hopffer states that the Mozambique specimens are smaller and of a duller red, but have more brilliant metallic spots than those from the Cape.

"October—December: March."—W. D'Urban.

This very beautiful *Zeritis* is noted by Mr. D'Urban as "very abundant at King William's Town, where it frequents bushes with sweet-scented flowers, one of its favourites being the thorny *Arduina ferax*. Mr. Bowker notes the same habits in this species.

King William's Town (W. D'Urban). Bashee River, Kaffraria (J. H. Bowker). Natal (Döhne).—Coll. Tri. et Coll. S. A. Mus.

Natal (W. Guenzius).—Coll. Brit. Mus

"Querimba."—Hopffer.

167. *Zeritis* Phosphor.

Zeritis Phosphor, *mihi*. N. Sp.

Exp. 10 lin.

Allied to *Z. Perion*.—*Shining golden-orange, with dark borders. Fore-wing*: costa dusky at base: a conspicuous brownish-black spot closing discoidal cell, and united to a border of the same colour, which, commencing on costa just above it, and very broad in apical portion, diminishes in width to anal angle, where it turns inward a little on inner-margin. *Hind-wing*: costa, base, and inner-margin broadly bordered or suffused with blackish-brown; a dark discocellular dot; beyond middle, parallel to hind-margin (which is edged with a black line) a row of blackish spots, forming a macular stripe from costal to inner-marginal bordering: lobe and tail on anal angle shaped and coloured as in *Perion*. **UNDER-SIDE**.—Very similar to that of *Perion*, ♀. *Fore-wing*: costa, apex, and hind-margin bordered with pale greyish-ochreous, with a reddish tint on hind-margin; ground-colour very pale orange-yellow; three metallic, black-edged spots in cell,—below cell a black spot contiguous to middle cellular one; only two metallic dots on costa; transverse stripe of six metallic, black-edged spots beyond cell (of which the three lower are confluent) not so straight as in *Perion*, but turning inwards so as to

appear almost continuous of spot closing discoidal cell; submarginal, metallic-dotted streak rather more strongly marked. *Hind-wing*: greyish-ochreous, with a ferruginous hind-marginal tinge; metallic dark-edged spots arranged much as in *Perion*; two in cell, one closing it; row beyond middle more conspicuous, composed of seven spots, arranged in pairs, except the seventh,—which, with the sixth, is large and brilliant; submarginal streak as in fore-wing, but strongly metallic at anal angle.

The antennæ are glistening beneath, but want the conspicuous white bar of *Z. Perion*; and the outline of wings is like that of the ♀, but less dentate.

This little species is curiously like *Z. Perion*, ♀, but is readily distinguished from it by its metallic-orange upper-surface, its solitary discoidal spot and broader (comparatively) hind-marginal border of fore-wing; and beneath by different arrangement of spots, which are more steely than golden. The above description is made from a single specimen, apparently a ♀. It is the smallest of the Genus that I have seen.

"Caught at the edge of a forest,—March."—J. H. Bowker.

Bashee River, Kaffraria (J. H. Bowker).—Coll. S. A. Mus.

168. *Zeritis Alphæus*.

Papilio Alphæus, *Cram.*, *Pap. Exot.*, pl. 380, f. E, F.

Hesperia Alphæus, *Fab.*, *Ent. Syst.*, III, 1, p. 333, n. [265.]

Polyommatus Alphæus, *Godt.*, *Enc. Meth.*, IX, p. 663.

Zeritis Alphæus, *Doubl.*, *Westw.*, *Hewits.*, *Gen. Diurn.* [Lep., pl. 77, f. 3.]

Exp. 1 in. $4\frac{1}{2}$ lin.—1 in. $10\frac{1}{2}$ lin.

♂. *Glossy-black*, with a broad, discal, submetallic-red band, from fourth subcostal nervule of fore-wing to submedian nervure of hind-wing, near anal angle; a mixed golden and purplish gloss over basal region; cilia white, with black spots at ends of nervules. *Fore-wing*: band exteriorly indented with black on nervules. *Hind-wing*: a narrow costal blackish border; inner-marginal region hairy, dull-grey; anal angle bluntly produced, marked with a red spot; on subcostal nervure, at origin of nervules, a small, subovate, glistening space. UNDER-SIDE.—*Hind-wing and border of fore-wing* (except inner-margin) hoary-grey, clouded with darker. *Fore-wing*: bright-orange, paling into dull-yellowish on inner-margin; at end of cell, two short, ferruginous, blackish-edged, transverse marks, between which is a greyish space; between them and apex, two longer similar, more widely apart, crenelated streaks from costa, converging as far

as orange, where the inner one ends, but the outer is dimly prolonged along external edge of orange. *Hind-wing*: a broad, central, dark-grey, ferruginous- and black-edged, transverse stripe, on its inner edge deeply pierced upwardly by a streak of ground-colour; a bright-ferruginous hind-marginal edging and parallel submarginal streak, both obsolete near apex; on anal angle a black spot.

♀. Wings rounder, especially hind-wing; fore-wing not apically prominent. *Red less metallic and paler, but occupying a larger field*, reaching nearer to base; dark borders narrower, not so black; cilia broader. **UNDER-SIDE.**—As in ♂. *Fore-wing*: streaks from costa not convergent.

The central band on under-side of hind-wing is sometimes quite divided by the grey intersection on discoidal nervule.

Hills and mountain-sides; rarely in low grounds.

July (b)—October (e). February (e). April (m).

This splendid *Zeritis* is very distinct from all its congeners, the under-side being quite void of the ordinary spots. It is also the most bulky, though not attaining the expanse of wings shown by some ♀s of *Z. Thero*. The best locality for *Alphæus* is the long hill lying between Wynberg and Protea; on one occasion I found it rather common near the highest block-house on the Devil's Mountain. Mr. J. L. Fry gave me a specimen taken by him on the Flats, and the single example I saw at Knysna (the only locality besides Cape Town known to me as a *habitat* of this species) was also on a little mound in the dry marshes. *Alphæus* is exceedingly rapid on the wing, but settles very frequently, and keeps constantly about one spot. It appears to settle most frequently on the leaves of young *Proteaceæ* and of *Watsonia*; I have only twice noticed it on flowers, and never on the ground. The ♀ is singularly scarce, even in the spots most frequented by ♂s; I cannot remember having seen more than five specimens in as many years' observation.

Cape Town.—Coll. Tri. Knysna (seen).

South Africa.—Coll. Brit. Mus.

169. *Zeritis Malagrida*.

Cygaritis malagrida, Wallgr., *Lep. Rhop. Caffr.*, p. 43.

Var.—*Zeritis Aglaspis*, Trimen, *Tr. Ent. Soc.*, 3rd Ser., [I, p. 286.

? *Polyommatus Evadrus* (var. 3), Godt., *Enc. Meth.*, IX, [p. 672.

Exp. 11 lin.—1 in. 9 lin.

♂. *Dull-orange, bordered with black*: bases more or less tinged with pale-fuscous; *cilia* conspicuously white, sharply interrupted with black at ends of nervules. *Fore-wing*: border moderately wide on costa (which is clouded with greyish-ochreous from base to middle), very broad at apex and at anal angle; a pale-ochreous spot, indenting costal border, marks end of cell. *Hind-wing*: border wanting on

costa, forming a broad apical patch, becoming suddenly narrow on first median nervure and diminishing to a point at anal angle; from inner edge of apical patch an indistinct blackish stripe is sometimes emitted to anal angle (which is very prominently produced). *UNDER-SIDE*.—*Hind-wing*, and apex and hind-margin of fore-wing, dull-fuscous, with brownish-white-clouded nervures, and spotted with silvery. *Fore-wing*: pale orange-yellow fading into whitish on inner-margin; costa very narrowly brownish, edged with silvery; the usual three spots, two in, one closing cell, silvery, thinly black-edged; a small spot just beyond cell, and two small costal ones above it; from apex an oblique line of two elongate spots, commencing a sharply bi-angulate row extending to third median nervule; inwardly edging a narrow brownish-white hind-marginal border four or five arrow-head spots, from apex, succeeded below by some fuscous marks. *Hind-wing*: the following silvery spots, viz.: a small costal spot at base; two in cell, and a large triangular spot closing it; two curved spots from costal partly converging to subcostal nervure; a small one on each side of submedian; beyond middle a transverse, very irregular row of variously-shaped spots; a submarginal row of arrow-head spots.

Var. ♂ and ♀ (*Aglaspis*, mihi). ♂. Much smaller; fore-wings not, or very slightly, elbowed on hind-margin; hind-wings with a very short anal-angular projection. Orange in both wings limited to a discal patch,—in fore-wing longitudinal, on median nervules,—in hind-wing transverse, submarginal, divided into four subovate spots by crossing nervules. *UNDER-SIDE*.—Much paler; often much tinted with reddish or vinous-ferruginous; markings similar, but much narrower and duller, and more regular (especially row of spots beyond middle of hind-wing). ♀. Paler, duller: orange more suffused, in fore-wing sending a curved ray nearly to costa close to apex. *UNDER-SIDE*.—As in ♂.

So very different in size, shape, and to some extent in marking, is the variety from what would seem to be the typical form of the species, that I felt some difficulty in reconciling the two. But the discovery near Stellenbosch, in great abundance, of a thoroughly intermediate form of the insect has shown me that, though greatly modified, the Cape Town examples are one and the same species with those from Swellendam. The Stellenbosch specimens, though nearer in form and colouration to the type form, show a decided approach to the variety, in the *wide basal clouding*, and *constant black stripe beyond middle of hind-wing*, on upper-side, and in the *much narrower and rather more regular markings and paler (or often vinous-ferruginous) ground-colour* of under-side. The ♀ is not unlike an enlarged Cape Town specimen, except for the orange before middle and brighter silvery marks: it has also a deep excavation between projection on third

median nervule and anal-angular prominence. I have not seen the ♀ of the typical form.

Hill-sides and summits.

December. February (b)—March (c).

Has quite the habits of its nearest congeners, flying rapidly, but for very short distances, after the manner of the *Hesperide*, and almost always settling on the ground. It may easily be taken with the fingers, if the collector gradually and cautiously approaches it. A most beautiful species.

Cape Town. Stellenbosch. Swellendam (L. Taats).—Coll. Tri.

“*Kaffraria* (Wahlberg).”—Wallgr.

170. *Zeritis Thyra*.

Papilio Thyra, Linn., *Syst. Nat.*, II, p. 789, n. 227.

“ “ “ *Mus. Lud. Ultr. Reg.*, p. 328, n. 147.

“ *Nycetus*, *Cram.*, *Pap. Exot.*, pl. 243, f. E, F.

Hesperia Thyra, *Fab.*, *Ent. Syst.*, III, 1, p. 314, n. 188.

Polyommatus Evadrus (var. 2), *Godt.*, *Enc. Meth.*, IX, [p. 672.

? ? *Polyommatus Thyra*, *Godt.*, *op cit.*, p. 663, n. 156.

Zeritis Thyra, *Doubl.*, *Westw.*, *Hewits.*, *Gen. D. Lep.*, [pl. 76, f. 9.

Exp. 1 in. 1 lin.—1 in. 6 lin.

♂. *Orange-red, with blackish borders. Fore-wing*: border rather narrow at base (where it is suffused with greyish-ochreous, which sometimes narrowly edges costa to apex), but widening greatly to apex, whence, abruptly narrowing on first median nervule, it is moderately broad along hind-margin to anal angle, where it usually widens again; base blackish mixed with ochreous. *Hind-wing*: border usually nearly obsolete on costa, but commencing more or less broadly about apex, narrowed abruptly on first median nervule, and thence only a dentate edging to anal angle. *UNDER-SIDE*.—*Hind-wing and border of fore-wing greyish or brownish-ochreous, or often purplish-lake, the former with irregular whitish streaks and spots. Fore-wing*: orange usually paler, especially towards inner-margin; two black spots in cell, one closing it, an inwardly-oblique transverse row of five or six beyond it, and a suffused submarginal row,—all spots above median nervule and its first branch white-centred, those of cell very conspicuously; below cell two blackish markings (one basal, one just beyond) usually confluent. *Hind-wing*: two small spots at base, one on costa, one in cell; a transverse row of four before middle (one in cell); a long streak closing cell, usually confluent

with a most irregular, very sharply dentated, more or less suffused transverse stripe immediately succeeding it; a small spot touching costal nervure about middle; a submarginal dentate streak, often indistinct, always so towards costa. In both wings traces occasionally of a hind-marginal row of spots sometimes interiorly bordered by some whitish marks. Cilia blackish, interrupted with white between nervules.

♀. *Orange usually rather paler and duller, border not so dark*; ochreous basal suffusion usually much broader. *Fore-wing*: at outer and upper edge of orange there is often an upward projection of that colour; border often very broad at anal angle. *Hind-wing*: apical border usually broader than in ♂. *UNDER-SIDE*.—As in ♂.

This species is very variable, chiefly in the colour of under-side of hind-wing and the distinctness of its markings, but also in the extent and tint of the orange of upper-side, which in some specimens is very limited in extent, in others very broad. I have no doubt of this being the true *Thyra* of Linné, having taken one specimen near Cape Town which answers in every particular to the details given in "Museum Ludovicæ, &c." In the majority of examples the under-side markings are not so bright as Linné notes them, and the orange of upper-side is more thoroughly one unbroken field. The *Thyra* of Godart seems to be a different species, coming nearer to *Z. Perion* than to any other. Some interesting specimens from Kaffraria show a striking resemblance, except for the chequered cilia and want of anal-angular point, to *Z. Pierus*, Cram., var. *Aranda*, Wallgr.), but the under-surface is quite as usual.

Pathways and bare spots on bill-sides.

October (e)—April (e).

Common. Has a short, swift flight, and abruptly settles on the ground or on stones. At Knysna I once or twice saw it on flowers of *Brunia*.

Cape Town. Stellenbosch. Bain's Kloof (Worcester side). Graham's Town (H. I. Atherstone). Knysna. Genadendal (G. Hettarsch).—Coll. Tri.

Bashee River, Kaffraria (J. H. Bowker).—Coll. S. A. Mus.

South Africa.—Coll. Brit. Mus.

171. *Zeritis Pierus*.

Papilio Pierus, Cram., *Pap. Exot.*, pl. 243, f. E, F.

„ „ *Herbst, Nat. Bek. Ins.*,—*Schm.*, XI, pl. [323, f. 10, 11.

Polyommatus Evadrus, Godt., *Enc. Meth.*, IX, p. 671, [n. 170 (*nec* Vars. 2 and 3).

Var. A. *Cygaritis Aranda*, Wallgr., *Lep. Rhop. Caffr.*, p. [43.

Zeritis Mars, Trimen, *Tr. Ent. Soc.*, 3rd Ser., I, [p. 285.

Var. B. ? *Hesperia* Suetonius, *Fab., Ent. Syst.*, III, 1,
[p. 320.

Cygaritis Taikosama, *Wallgr., Lep. Rhop. Caffr.*,
[p. 43.

Allied to *Z. Thyra*, Linn.

Exp. 11 lin.—1 in. 5 lin.

♂. *Orange-red, deeper than in Thyra, with more widely-suffused bases and broader borders (especially at anal angle of fore-wing and on costa of hind-wing); cilia not or inconspicuously chequered. Fore-wing: in many specimens, an upward projection at extremity of orange as in ♀ Thyra. Hind-wing: orange more sharply and regularly indented by hind-marginal edging. UNDER-SIDE.—Hind-wing and border of fore-wing greyish- or ferruginous-brown, or purplish-lake, the former with indistinct shining-greyish or submetallic spots. Fore-wing: spots as in Thyra. Hind-wing: spots arranged as in Thyra, but central irregular stripe and submarginal streak replaced by rows of small spots not differing from other spots of wing.*

♀. Not differing much from ♀ *Thyra*. UNDER-SIDE.—As in ♂, but spots of hind-wing more distinct.

Var. A, ♂ and ♀ (*Aranda*, Wlgr.; *Mars, mihi*). Smaller than type; *ground-colour brighter, paler, occupying a much larger area, covering costa of fore-wing to about middle, and filling hind-wing excepting for large apical patch and very thin (sometimes all but obsolete) hind-marginal edging; cilia not chequered, usually much tinted with purplish-lake; anal-angular projection of hind-wing longer and sharper. Hind-wing: a small black spot near anal angle, above submedian. UNDER-SIDE.—Subject to same variation in colour; same spots,—but all those of fore-wing except submarginal row brightly silvery-white-centred, and those of hind-wing always more metallic, and sometimes quite silvery: no traces of a marginal row of spots in either wing.*

Var. B ♂ and ♀ (? *Suetonius*, *Fab.*, ♀; *Taikosama*, Wlgr., ♂).—Larger than type; much paler.

♂. *Orange in fore-wing usually limited to two or three small discal rays, and often only represented by two faint dots, or a few scales (in one specimen utterly wanting); in hind-wing to a discal patch of three or four rays; the rest of area being occupied by greyish-brown, with a hoary tinge near bases; cilia more or less chequered. UNDER-SIDE.—Varies from whitish- to greyish- and ferruginous-ochreous, never lake. Fore-wing: orange rather duller and paler than in type and other variety; more spots white-centred than in*

type, as in Var. *Aranda* (in one specimen the centres are bright silvery-white). *Hind-wing*: spots larger, more shining, and more conspicuous than in type, *being always more or less well-defined by dark edges*, those of central row more contiguous, forming an interrupted macular streak.

♀. Not unlike type, but paler (especially near bases); orange sometimes very faint. *Fore-wing*: orange of disc often divided from basal suffusion. *Hind-wing*: marginal edging represented by a row of spots marking orange. **UNDER-SIDE**.—As in ♂.

Widely different as the two varieties noted are from the typical *Pierus*, I find myself unable, after a long investigation of a very numerous series of examples, to regard them as distinct. They are, however, both very marked divergent races of the species. Wallengren thinks the Var. A (his species *Aranda*) to be the same as Godart's third variety of *Ecadrus*, but the latter's mention of the *orange of hind-wing being crossed by a blackish ray*, and of the under-side's being "parsemé de points et de chevrons d'un blanc-argenté, &c.," causes me to believe that Godart's third variety is none other than *Z. malagrida*, Wlgr. As already observed, some specimens of *Z. Thyra* show a singular resemblance to Var. A on the upper-side. The ♂ of Var. B is so widely dissimilar above from the type that I for some time believed it to be a distinct species, but the gradations, even in this sex, into *Pierus* proper are very complete, a specimen which I took at Knysna having very nearly as much orange as the type specimens; while the ♀s, save for their paleness, differ but little from those of *Pierus*. I possess a specimen of *Pierus* ♂, and another of Var. A ♀, which alike vary from the ordinary colouration, the orange of fore-wing being limited to a space before middle and a small discal spot beyond middle, and the costal border of hind-wing being much broader than usual.

Dry, sandy spots, chiefly in hilly places.

October (b)—April (c).

Almost invariably settles on the ground, and is very easily captured*. The type form, which was very common at Knysna, is very rare near Cape Town, and would seem equally so in British Kaffraria, Mr. D'Urban having met with only a single specimen. The same may be said of Var. A, which, however, was more frequently taken by Mr. D'Urban, and seems to be common in Kaffraria Proper. Var. B would appear to be the dominant form of the species, being extremely abundant near Cape Town, "common" at King William's Town, and frequent on the Bashee River. I found the latter plentifully at Stellenbosch, but only once took it at Knysna.

Cape Town. Stellenbosch. Wellington. Knysna. Plettenberg Bay. Bashee River, Kaffraria (J. H. Bowker).—Coll. Tri. et S. A. Mus.

King William's Town. "Near Fort Murray, and between Breakfast Vley and Fort Hare."—Coll. W. D'Urban.

172. *Zeritis Thero*.

Papilio Thero, *Linn., Syst. Nat.*, II, p. 787, n. 219.

" " " *Mus. Lud. Ulr. Reg.*, p. 328, n. 146.

* I have sometimes taken Var. A on *Brunia* flowers.

Papilio Rumina, *Dru.*, *Ill. Nat. Hist.*, I, pl. 2, f. 1.

„ *Salmonæus*, *Cram*, *Pap. Exot.*, pl. 341, f. D, E.

Hesperia Thero, *Tab.*, *Ent. Syst.*, III, 1, p. 274, n. 57.

Papilio Pulsus, *Herbst*, *Nat. Bek. Ins.*—*Schmett.*, VII,
[pl. 156, f. 6, 7.

Polyommatus Thero, *Godt.*, *Enc. Meth.*, IX, p. 662, n. 154.

Zeritis Thero, *E. Doubl.*, *List Lep. Brit. Mus.*, II, p. 56.

Zerythis Thero, *Chenu*, *Enc. d'Hist. Nat.*—*Pap.*, f. 351.

Exp. 1 in. 7 lin.—2 in. 1½ lin.

♂. *Dark-brown*, with orange-red spots: bases rather widely scaled with orange-ochreous; *hind-wing* with two tails,—a rather long acute one on submedian nervure, and a shorter one on third median nervule; *cilia* whitish, with wide brown interruptions at ends of nervules. *Fore-wing*: spots subquadrate; one in cell, and another just beyond it; a discal row of five parallel to hind-margin (of which the first three are smaller and sometimes indistinct) between fourth subcostal and third median nervules; below third median, rather before middle, the largest spot in wing. *Hind-wing*: a submarginal row of four broad lunular spots between discoidal nervule and submedian nervure (the first, and sometimes the second also, occasionally obsolete), of which the last, as well as anal-angular lobe, is marked with a pale-edged black spot.*
UNDER-SIDE.—*Hind-wing*, and borders of *fore-wing*, soft-grey clouded with brown. *Fore-wing*: orange-red; two silvery-white-centred black spots in cell, and a third, larger, closing it; spots of discal row more or less confluent, the first four (there being an additional costal one) dimly white-centred; a spot on either side of origin of third median nervule. *Hind-wing*: central region brown; the following silvery-white markings, sometimes with ferruginous edges, viz.: a small spot near base, just below costal nervure; a transverse row of four before middle, of which the second (in cell) is large and elongate; *closing cell*, a large irregular marking, emitting a broad ray along discoidal nervule to beyond middle, where it unites with the fourth spot of a very irregular discal row of seven or eight linear spots; hind-margin paler, with a submarginal row of more or less distinct blackish lunules.

♀. Similar to ♂. *Fore-wing*: sometimes an additional orange spot between second and third median nervules, close to their origin. *Hind-wing*: some two or three small orange marks on disc before lunular row, of which the spots are larger and brighter. *UNDER-SIDE*.—All markings more clearly defined.

* All these spots, save that near anal angle, are sometimes wanting.

A ♂ in my collection has the spot in cell on under-side of fore-wing united to the marking closing cell.

Waste, sandy places.

September. October.

Has the same habits as most of the Genus. The bright markings of under-side of hind-wing render it conspicuous when at rest. It was not uncommon on the sand-hills at Mossel Bay on the 20th September, 1858. I took a ♂ at Stellenbosch flying about a rose-hedge at the side of a road. This fine insect attains a wider expanse of wings than any of the South African *Lycanidæ*.

Stellenbosch. Mossel Bay. Paarl. Worcester. Swellendam (L. Taats).—Coll. Tri.

Cape Colony.—Coll. S. A. Mus.

South Africa.—Coll. Brit. Mus.

173. Zeritis? Protumnus.

Papilio Protumnus, *Linn., Mus. Lud. Ulr. Reg.*, p. 340.

„ Petalus, *Cram., Pap. Exot.*, pl. 243, f. C, D.

Polyommatus Petalus, *Godt., Enc. Meth.*, IX, p. 672,
[n. 171.]

Var. Zerythis? Basuta, *Wallgr., Lep. Rhop. Caffr.*, p. 46.

Exp. 1 in. 2 lin.—1 in. 9 lin.

♂. *Dull fuscous-ochreous, with black spots, and dull-blackish borders.* Fore-wing: a large, more or less defined, elongate spot at end of, and running into, cell; beyond it, from costa, a row of confluent spots, angulated inwardly on first median nervule and extending to middle of submedian nervule (the whole of the row below first median is often wanting or very faintly marked); costa rather narrowly bordered with greyish; hind-marginal blackish border broad, nearly even throughout; a smooth greyish space covers median nervules at their origin. Hind-wing: the broad blackish border leaves only an inner-marginal and discal ochreous space, not extending above discoidal nervule; crossing ochreous nearly to submedian an ill-defined macular stripe. UNDER-SIDE.—Hind-wing and borders of fore-wing hoary-grey, the former crossed by two rows of faint-brownish confluent spots. Fore-wing: pale yellow-ochreous; spots as above, but smaller and more distinct,—that closing cell divided into two; below the inner of these two, outside cell, a small round spot; hind-marginal border faint-fuscous towards anal angle, sometimes marked interiorly by a row of very indistinct, small, dark spots. Hind-wing: markings variable and often very indistinct; macular row before middle very irregular and sometimes very much broken up,—a

portion of it always marks end of cell, where it is often confluent with the more regular, broader, and better-defined discal row; two or three indistinct brownish spots near base. *Cilia* white or whitish, interrupted with dull-blackish.

♀. Similar, but *ochreous much clearer*, so that the black spots are more conspicuous; *borders brownish*. *Fore-wing*: spot at end of cell often divided, sometimes confluent with discal row on first median; no grey space at origin of median nervules. *Hind-wing*: a streak closing cell sometimes visible. UNDER-SIDE.—As in ♂, but markings of *hind-wing* sometimes better marked.

Var. A, ♂ and ♀ (*Z. Basuta*, Wlgr.).

♂. Ochrey-fuscous throughout, the black markings inconspicuous. *Fore-wing*: immediately beyond spot closing cell *a whitish spot*, and, outwardly edging very indistinct discal macular row, *a series of six or seven dull-whitish spots* (these whitish markings take the place of ochreous in typical form). *Hind-wing*: all but spotless, only very faint traces of a paler space and the usual dark spots. UNDER-SIDE.—*Markings very thin and faint*; *disc of fore-wing whitish, with all spots separate and very small, and an additional spot near base in cell*; in both wings a submarginal row of small blackish spots. *Hind-wing*: rows of spots very inconspicuous (sometimes scarcely distinguishable) but less irregularly arranged, and the spots more separate, those near base forming a third, curved, transverse row. *Cilia* greyish, very indistinctly varied with fuscous.

♀. *Darker, the black spots of fore-wing very dark and confluent, the pale conspicuously white*; those of hind-wing more apparent. UNDER-SIDE.—Disc of fore-wing much whiter, spots of hind-wing much better defined; submarginal row of dots more distinct.

Different in aspect as the Kaffrarian variety is from the type of *Protumnus*, it is indubitably the same species. At the Knysna, where the insect is extremely abundant, a strictly intermediate form, and that only, is found, in which the ♂ is almost *concolourous fuscous* with scarcely a tinge of ochreous, and the ♀ exhibits *pale dingy-ochreous* colouration in fore-wing. At Plettenberg Bay another gradation of the species, considerably nearer to the type, occurs, in which the ♂ has markings of very dull pale-ochreous, while the ♀ (single specimen) is coloured like the typical ♀, but has all hind-wing, except apical border and the usual spots, ochreous.* In the Knysna form the outer macular row of under-side of hind-wing is quite regular, and the spots of the submarginal row, both in this and in the

* This gradation of the Butterfly presents in both sexes, on the under-side of *hind-wing*, dark macular bands, and also a *peculiar, very dark longitudinal streak occupying upper region of cell and abruptly angulated and terminated at its extremity*.

specimens from Plettenberg Bay, are shaped like arrow-heads, and distinctly marked. The type form is found near Graham's Town.

I am inclined to think, with M. Wallengren, that this species should be held the type of a new Genus, the elongated and stout palpi, thick and very short antennæ, clumsily-made body, and peculiar markings and colour, conferring upon it a distinctness of its own. Specimens from Knysna have the antennæ much shorter than those of examples from Kaffraria, and not quite so long as are found in the typical form.

Waste, sandy places at road-sides, bases of hills, &c.

November (c)—February (b). "October."—W. D'Urban.

This curious butterfly seems fonder of sand and heat than any species with which I am acquainted. At Knysna, I used frequently to find specimens sitting on the heaped-up dust of the roads, and appearing to like it better than any other situation, as they would return after being disturbed by any passing traveller or waggou. The insect is very difficult to see when settled, assimilating as it does so closely to the colour of the surface on which it loves to rest. Its flight is very short and not so rapid as that of most species of *Zeritis*.

Cape Town. Stellenbosch. Knysna. Plettenberg Bay. New Year's River, Albany (H. I. Atherstone).—Coll. Tri.

"King William's Town and Izeli."—W. D'Urban, in litt.

Bashee River, Kaffraria (J. H. Bowker).—Coll. S. A. Mus.

Genus LUCIA ?

Lucia, Westw.

IMAGO.—*Palpi* long, ascendant, roughly fringed with hair beneath; *antennæ* short, stout, with a cylindrical rather gradually-formed club. *Wings* entire: fore-wings long, with straight costa and convex hind-margin; hind-wings much rounded, without inner-marginal groove. *Legs* short and thick, the *tibæ* very densely hairy.

I have followed Hopffer in referring to the above Genus, which only contains a few Australian species, the very curious little butterfly named *Delegorguei* by Boisduval. In the "Genera of Diurnal Lepidoptera" this insect is doubtfully referred to *Lycæna*, from which it is certainly very distinct. Not having examined the species of *Lucia*, or Westwood's diagnosis of that Genus, I am necessarily uncertain whether Hopffer is right in the position he has assigned to *Delegorguei*, and the above generic characters are taken solely from the South African species named.

174. *Lucia* (?) *Delegorguei*.

Lycæna Delegorguei, *Boisd., App. Voy. de Deleg.*, p. 588.

„ (?) *Delegorguei*, *Doubl., Westw., Hewits., Gen.*

[*D. Lep.*

Lucia Delegorguei, *Hopffer, in Peters' Reise nach Moss.,*
Exp. 10 lin.—1 in. 2 lin.

[p. 411.

♂. *Fuscous-brown, with a very slight purplish gloss.*
Fore-wing: a faint indication of a darker spot at end of cell.
 UNDER-SIDE.—Much paler. *Fore-wing*: a row of very brilliant steely dots along costa, larger and dark-edged beyond middle; on hind-margin a row of five larger steely spots, inwardly black-edged, between apex and third median nervule; spot at end of cell large, ill-defined, dark-brown; a little beyond it a similar larger, subquadrate mark on discoidal nervules, usually marked with some steely scales; costa near base and hind-marginal edge tinged with golden-ochreous.
Hind-wing: a central transverse band of glossy ochrey-brown, of unequal width, marked on both its edges with steely points (of which there are also a few in middle of stripe); a good-sized similarly-hued spot in cell and two others on costa before middle; beyond middle, a row of five contiguous, pale-edged, steely-centred ochrey spots, obsolete above second subcostal nervule; hind-marginal spots as in fore-wing, but more conspicuous and occupying the whole length; inner-marginal and discal region thickly irrorated with violaceous-white scales. Cilia greyish.

♀. Bases with bluish-grey hairs and scales; in each wing a discal space of white outwardly ill-defined. Cilia paler, nearly white in hind-wing, inconspicuously interrupted with fuscous. UNDER-SIDE.—Markings similar to ♂, but white occupies the ground, except on hind-margins and on costa of fore-wing. *Fore-wing*: discal and cellular spots very conspicuous, the latter confluent with a brownish space on median nervule from base. *Hind-wing*: markings very conspicuous on white ground.

Many ♂ specimens taken by Mr. D'Urban are very much paler than above described, while ♀s corresponding with them have no white patch, but a very pale greyish disc, gradually shading off into the narrow marginal brownish in both wings. Beneath, in both sexes, the central band of hind-wing is more macular, it and all the spots being of the same golden-ochreous as hind-marginal edge of fore-wing. In the latter wing the costal steely dots are often inconspicuous or partly obsolete, and the large cellular and discal spots not strongly marked. Mr. D'Urban, who was inclined to consider this variety (often much smaller than the type) as a distinct species, informed me that it occurred earlier in the season than the dark specimens.

"Abundant. Larva probably feeds on *Theodora speciosa*."—D'Urban, in litt.

"September, October, and March to June."—Id.

"Among long dry grass, keeping a long time on the wing, and difficult to take."—J. H. Bowker, in litt.

King William's Town (W. D'Urban).—Coll. Tri.

Butterworth and Pashee River, Kaffraria (J. H. Bowker).—Coll. S. A. Mus.

"From Graham's Town to King William's Town."—W D'Urban, in litt.

"Moselekatze's Country."—Boisd.

"Cape. Querimba."—Hopffer, loc. cit.

Genus D'URBANIA. N. G.

IMAGO.—*Head* of moderate size: eyes ovate, smooth, rather small, slightly prominent; palpi rather long, porrected divergently, scarcely rising above forehead, scaly, second joint long and stout, terminal joint slender; antennæ short (especially in ♀), rather stout, with a well-marked, sub-cylindrical, rather abruptly-formed, obtuse-ended club, and with conspicuous white rings; no tuft of hairs on forehead. *Thorax* compressed, short, not stout, with a few short hairs laterally and posteriorly: prothorax with a dense clothing of short hair. *Wings* large, elongate, rounded entire. *Fore-wing*: costa moderately arched from base; apex rounded; hind-margin rather markedly convex, the anal angle being very much rounded off; inner-margin straight; nervures short and weak, yet with a slight inclination to be swollen at base; the nervules unusually long, the first subcostal and third median nervules being inserted very near to base; discoidal cell short, rather wide at extremity, apparently closed by a scarcely-perceptible nervule. *Hind-wing*: costa strongly arched just at base, thence almost straight; hind-margin as in fore-wing, the apical and anal angles being yet more rounded off; inner-margins almost straight, just covering the sides of abdomen, but no part of its under-surface, being widely separate at its base; discoidal cell closed, rather longer and wider than in fore-wing. *Legs* short, the femora stout, scaly; tarsi of fore-legs of ♂ composed of a single elongate joint, with the unguis obsolete,—those of ♀ with the joints compressed, and provided with minute unguis; posterior tibiæ in both sexes destitute of spurs. *Abdomen* short, compressed.

Larva and *pupa* unknown.

I have dedicated this curious and interesting Genus to my friend W. S. M. D'Urban. It is, without question, the most valuable result of his Kaffrarian researches. The single species on which it is founded presents an aspect wholly at variance with that of the typical *Lycenidæ*, possessing none of the metallic or silky lustre of the *Lycænæ* or *Chrysophani*; the general colouring and texture, as well as the shape, of the wings, and the weak structure of the body, forcibly reminding one of the *Satyridæ*. The fuscous-and-whitish

irrorated under-surface differs widely from all those that I have examined in this family. *D'Urbania* seems more nearly allied to *Pentila* than to any other Genus of *Lycænidae*, but is at once recognized by the much longer palpi and short abdomen (which latter is elongate in *Pentila*, and thickened at its extremity). As frequently happens in cases of this nature, the habits of this Genus tend to support its analogy with the *Satyridæ*, Mr. D'Urban having constantly taken it settling on rocks and large stones,—not on flowers, like the great majority of the family.

175. *D'Urbania Amakosa*.

D'Urbania Amakosa, *Trimen, Tr. Ent. Soc.*, 3rd Ser., I, Exp. 1 in. 2 lin.—1 in. 6 lin. [p. 401.]

Dark-brown, inclining to fuscous: each wing with a submarginal, curved, transverse row of orange-yellow spots.

♂. *Fore-wing*: row of six spots, forming almost a semicircle, extending from subcostal to submedian nervure,—sometimes indistinctly marked. *Hind-wing*: somewhat paler than fore-wing; only four spots in transverse row, which is not markedly curved, extending from second subcostal to third median nervule. Cilia of both wings conspicuously chequered brown and white. *UNDER-SIDE*.—*Fore-wing*: before transverse row of spots thinly, beyond it thickly, irrorated with whitish; row of orange spots increased to a broad macular stripe; the irrorations immediately succeeding stripe forming a series of acute, rather indistinct lunules. *Hind-wing*: universally and densely irrorated with whitish; the position of the transverse row of upper-side faintly indicated by some scarcely distinguishable whitish spots, followed by some indistinct fuscous lunules. Cilia not so conspicuously chequered as above.

♀. Orange spots in both wings enlarged and confluent, forming a broad band, which in fore-wing widens at its lower extremity. Cilia as in ♂. *UNDER-SIDE*.—Quite similar to that of ♂: orange band of fore-wing paler than on upper-side.

"November and January; common, sitting on rocks and stones."—*D'Urban*, in litt.

"Found in *"open"* on rocky hills; easily caught."—*J. H. Bowker*, in litt.

This remarkable butterfly seems to be local in its haunts, but not uncommon where found. The orange bands present considerable variation as regards their width, curvature, and the contiguity or confluence of the spots composing them.

King William's Town (*W. D'Urban*). Bashee River, Kaffraria (*J. H. Bowker*).—Coll. *Tri. et Coll. S. A. Mus.*

Genus PENTILA.

Pentila, *Boisd.*Tingra, *Boisd.*

IMAGO.—*Head* small: *antennæ* short, with a short, thick, elongate-ovate club; *palpi* very small and short, closely appressed to head. *Wings* large, elongate, entire. *Fore-wing*: costa moderately arched, hind-margin convex. *Hind-wing*: ovate, hind-margin being strongly convex. *Legs* short, thick, scaly: *fore-legs* of ♂ small, imperfect. *Abdomen* elongate, thickened at extremity.

The species composing this singular and aberrant Lycæni-deous Genus are of weak and delicate structure, reminding one to some extent of the Moths called *Geometræ*, a resemblance increased by their faint colouring speckled with blackish. Five species have been discovered in Western Tropical Africa, one only of which is as yet known to inhabit the South. This species seems widely spread, Hopffer recording it from Querimba, on the coast of Eastern Africa.

176. *Pentila tropicalis*.

Tingra tropicalis, *Boisd.*, *App. Voy. de Deleg.*, p. 589,
n. 46.

Pentila „ *Hpfr.*, in *Peters' Reise nach Moss.*,
[p. 413.]

Tingra „ *Wallgr.*, *Lep. Rhop. Caffr.*, p. 46.

Exp. 1 in. 6 lin.—1 in. 8 lin.

♂. *Yellow-ochreous, with blackish dots: fore-wing with a blackish border; each wing with a dot at end of discoidal cell. Fore-wing*: costa dusted with blackish; apex and hind-margin more or less widely bordered with blackish, which sometimes becomes macular towards anal angle; three dots in cell, and one below median nervure, near origin of second nervule. *Hind-wing*: a dot before middle, above subcostal nervure. Cilia interrupted with blackish. **UNDER-SIDE**.—*Paler: hind-wing and edges of fore-wing irrorated with elongate dark atoms; commonly two transverse rows of dots beyond middle, of which the outer is more distinct and parallel with hind-margin. Fore-wing*: dots as above, but sometimes three additional ones above subcostal nervure before middle. *Hind-wing*: two additional dots, one at base, the other in cell close to extremity.

♀. Similar: *no hind-marginal border, but a row of dots in fore-wing.*

Wallengren's *variety* of this very curious butterfly appears to be a ♀, in which the hind-marginal dots are wanting.* Boi-duval's description of the ♀ coincides with the characters of the ♂s that I have examined.

Port Natal.—Coll. Brit. Mus.

“Bay of Port Natal. Ashanti.”—Boisd.

“Querimba.”—Hpfr.

FAMILY 9.—HESPERIDÆ.

HESPERIDÆ, *Leach* (1815), *Swains.*, &c.

HESPERIIDÆ, *Steph.*

HESPERIDES, *Latr.*

HESPERII, *Blanch.*, *Chenu.*

IMAGO.—Very robust in structure. *Head* broad (often as wide as thorax): *proboscis* very long; *eyes* smooth; *palpi* thick, obtuse, very densely clothed with scales and short hairs; *antennæ* with a wide space between them at their origin, usually gradually incrassate, often terminating in a slender hook, or with the club recurved or subangulated.† *Thorax* long, thick and broad. *Wings* rather small. *Forewings* long, often produced and pointed at apex: costa nearly straight; discoidal cell usually very long, sometimes closed. *Hindwings* short, truncate, often lobed (rarely tailed) at anal angle: cell rather long, sometimes closed. *Legs* alike in both sexes, fore-legs complete and fitted for walking: tibiae of hind-legs with two pairs of spurs, the additional pair being about middle of the joint. *Abdomen* compressed, of variable length.

LARVA.—Elongate, cylindrical, sometimes rather hairy: *head* large, the segments next it much narrowed.

PUPA.—Attached by tail and silken band round middle; sometimes in a silken cocoon within rolled-up leaves: usually smooth, not angulated; head with a more or less acute point.

The HESPERIDÆ are allowed by authors to be of all the Families of Butterflies the most nearly-allied to Moths, and the group is consequently placed last in the series in the generally received arrangements of the Diurnal Lepidoptera. But, strongly as the broad head, with its antennæ inserted widely apart, the somewhat heavily-made body, the loosely-scaled and often horizontally-held wings, the two pairs of spurs

* I have since seen a similar ♀ specimen from Natal.

† At base of each antenna, in several Genera, a slender dependent tuft of hairs.

on the hind tibiæ, and the Pupa in a cocoon of silk-united leaves, evince a relationship to the Heterocera, the Butterfly structure is yet predominant, and plainly shown by the more or less clavate antennæ, the absence of any uniting bristle and socket at the bases of the wings, the usually well-marked under-surface, and the neuration of the wings. The flight of the insects of this group is also exclusively diurnal.

Interesting as the HESPERIDÆ are, as marking the point where, in the Lepidopterous Order, Rhopalocerous structure begins to pass into Heterocerous, they have met with less attention from entomologists than the butterflies of any other Family. This is, no doubt, primarily owing to the insignificant position the group holds in Europe, where only a few species of small size and inconspicuous appearance are found. America appears to be the metropolis of the Family, particularly the tropical region South of the Equator, where, in number, size, and brilliancy of hue, the species attain their maximum of developement. The flight of these insects, though remarkably swift, is more frequently interrupted by settling than even that of the LYCENIDÆ, and the abruptness with which the apparently headlong flight suddenly terminates, after a career of a few feet in extent, has obtained for the HESPERIDÆ in England the title of "Skippers."

Several species of *Pyrgus*, *Cyclopides Metis*, *Pamphila Letterstedti*, and others seem to be very generally distributed, and will be readily obtained by the collector, but the fine species of *Ismene*, *Leucochitonea*, and many others, seem more tropical in character, and can scarcely be looked for further to the South and West than British Kaffraria.

Genus PYRGUS.

Pyrgus, Hübn.

Thymeles, Steph.

Syrichthus, Boisd.

IMAGO.—*Head* with tufts at bases of antennæ: *palpi* rather long, second joint densely and compactly hairy, terminal joint short and rather thick and distinctly projecting beyond hairs of second joint; *antennæ* short, with a rather abruptly-formed cylindrical club very slightly curved. *Fore-wings* rather acute; costa slightly hollowed in centre. *Abdomen* as long as, or slightly longer than, hind-wings.

The Butterflies of this Genus are of small size, black or dark-brown in ground-colour, and thickly spotted with white. A great similarity of pattern prevails among them, rendering

It no easy task to distinguish several of the species; but I believe that I have satisfactorily determined five found in South Africa. Of these, *P. Elma* may be at once known by the transparent spots of fore-wing, and *P. Mohozutza* by its marginal row of fulvous spots.

177. *Pyrgus Vindex*.

Papilio Vindex, *Cram.*, *Pap. Exot.*, pl. 353, f. G, II.
Hesperia „ *Godt.*, *Enc. Meth.*, IX, p. 785, n. 148.
? Pyrgus „ *Doubl.*, *Westw.*, *Hewits.*, *Gen. D. Lep.*,
„ „ *Hpfr.*, in *Peters' Reise nach Mossamb.*,—
[*Ins. und Myr.*, p. 421.
? Var. Pyrgus Diomus, *Hpfr.*, *op cit.*, p. 420, pl. 27,
[f. 9, 10.]

Exp. 10 lin.—1 in. 1 lin.

Brownish-black, with white spots. *Fore-wing* : on costa a whitish spot near base (sometimes wanting), and a thin white edging to apex interrupted in four places; three spots in cell, the outer one lunular and closing cell, that nearest base subquadrate, the central one (nearer to basal than outer spot) elongate; below first cellular spot, touching submedian nervure, a whitish spot, sometimes indistinct; beyond cell, a row of four spots, of which the first is elongate and crossed by two subcostal nervules, the second small between first and second median nervules, the third large and just below outer cellular spot and crossed by third median nervule, the fourth small and semicircular (above submedian nervure) and the nearest to base of the row; between row and fringe two rows of white dots, the inner one of eight dots usually complete and well marked, the outer imperfect, with its dots between nervules and touching cilia. *Hind-wing* : a small round spot in discoidal cell near base; a rather broad, white, transverse band, abruptly commencing on second subcostal nervule, closes cell and extends irregularly and more narrowly to submedian nervure; rows of dots as in fore-wing, but outer row more regular and perfect than inner, which is obsolete towards costa, and of which the first dot (on fold beyond cell) is enlarged into a good-sized spot. Cilia broad, white, interrupted with black. **UNDER-SIDE.**—Costa and apex of fore-wing and ground-colour of hind-wing *paler or darker greyish-ochreous*; black of fore-wing less dark. *Fore-wing* : spots as on upper-side, but costa from base broadly whitish. *Hind-wing* : costa edged with whitish, especially on basal

prominence; transverse stripe of upper-side commencing on costa, but widely interrupted on subcostal nervules, and joining a longitudinal white space on inner-margin from base to anal angle, bounded by submedian; before middle a similar transverse white stripe, commencing with a large costal patch, more or less interrupted on subcostal nervure, and narrowing to join inner-marginal white on submedian. Cilia tinged with yellowish, its interruptions with ochreous.

? *Var. A*, ♂ and ♀ (*P. Diomus*, Hpfr.), *Fore-wing*: first cellular spot (next base) sometimes wanting, as well as (usually) costal basal spot; last spot of transverse row often absent; in some specimens an extra dot below central cellular spot. *Hind-wing*: band more narrow, *its direction oblique* and towards anal angle, a few whitish scales often indicating its continuation towards costa. Cilia usually more obscured. *UNDER-SIDE*.—*Fore-wing*: as usual; the first cellular spot always well-marked. *Hind-wing*: *three oblique white stripes*, which appear to have resulted from the confluence, 1^o, of the basal white with the inner portion of stripe before middle, 2^o, of the costal portion of stripe before middle with inner portion of central stripe, and 3^o, of costal portion of central stripe with row of white dots, which are confluent, forming a dentate streak; of these stripes the two first join inner-marginal white, and the third almost does so.

After a very careful comparison of a long series of specimens with Cramer's figures, I have no hesitation in giving the examples above described as the true *Vindex*. As regards the presumed variety, the difference of the under-surface of hind-wings is certainly remarkable, but I think not more so than in many banded species of Lepidoptera, in which the confluence of stripes often produces a very distinct-looking form. I have taken specimens presenting this peculiar marking commonly near Cape Town, often flying in company with the typical individuals. I have queried the reference to the "Genera" of Doubleday and Westwood, because, not having such abundance of specimens when in England, I was unable to make sure that the example figured was truly *Vindex*. Hopffer (who, in common with Godart, describes the under-side of hind-wings as white, with brown stripes—while I consider it as white-striped on an ochreous ground) thinks that the *Vindex* of the Eucyclopédie is distinct from Cramer's species, merely because Godart makes no mention of the central brown stripe anastomosing with the hind-marginal brown.

Open ground, and stony spots on hill-sides, &c.

February (b)—May (m). August (m)—October (b). December. "September. January—April."—D Urb., in litt.

This species is very conspicuous when settled with wings expanded on a stone or low plant, the spots being more purely white than in other South African *Pyrgi*. It is common around the bases of the Table Mountain and Lion's Hill. Specimens from Kaffraria are larger and paler beneath than ordinary examples.

Cape of Good Hope.—Coll. Brit. Mus. ?

Cape Town. Muizenberg. Knysna. Plettenberg Bay.—Coll. Tri.

Pluto's Valley, near Graham's Town. King William's Town.—Coll. W. D'Urban.

Bashee River, Kaffraria (J. H. Bowker).—Coll. S. A. Mus.

"Cape. Guinea. Querimba."—Hpfr., loc. cit. (var. *Diomus*).

178. *Pyrgus Asterodia*.

Pyrgus Asterodia, mihi. N. Sp.

Exp. 9—10 lin.

Nearly allied to *P. Vindex*, Cram., but ground-colour paler, more glossy, and spots smaller, not so white. Fore-wing: three spots in cell, the central largest and nearer to outer than inner spot (the reverse being the case in *Vindex*); above central spot is one on costa composed of three short lineolæ, no trace of which exists in any example of *Vindex*; row of spots beyond middle including an additional dot (the fourth from costa), and more curved inwardly, so that the two lowest spots come in line with central cellular spot and that above it,—the lowest spot largest, while in *Vindex* the last but one is invariably the largest in the row; an interrupted submarginal row of dots, but no vestige of the row immediately within fringe; spot beneath first cellular one wholly wanting. Hind-wing: transverse stripe commencing on costa, very much attenuated interiorly; dot near base small, indistinct; row of dots as in fore-wing. UNDER-SIDE.—Fore-wing: apical colour warmer, less inclining to greyish. Hind-wing: ground-colour more inclining to fulvous, especially in one specimen; first stripe nearer base, second not interrupted, as in *Vindex*, continuous from costa to inner-marginal stripe, which is greyish rather than white; some fuscous variegation of ground-colour, especially on edges of stripes, and dots of submarginal row, which are somewhat enlarged, though ill-defined.

The differences of marking above-noted, smaller size, and more slender structure, warrant the separation of this insect as a distinct species. It bears more resemblance to the European *P. Alveolus*, Linn., than is found in the other South African *Pyrgi*. I only took two specimens of this butterfly, in February, 1859, at Plettenberg Bay. It frequented marshy land on the banks of the Brouw River, delighting to settle on low flowers. It was not rare, but I thought it at the time only a variety of *Vindex*, and so passed over many specimens. Mr. Taats has forwarded me an example from the Swellendam district.

Plettenberg Bay. Breede River (L. Taats).—Coll. Tri.

179. *Pyrgus Sataspes*.

Pyrgus Sataspes, mihi. N. Sp.

Exp. $9\frac{1}{2}$ lin.—1 in.

♂. *Fuscous-brown, with small, dull-whitish, rather suffused spots. Fore-wing:* general arrangement of spots as in *P. Vindex*, Cram.; never more than two spots in discoidal cell, one of which closes it; spots in transverse row beyond middle less separated, the row of three on costa more in line with the rest, *i.e.*, not lying so obliquely towards hind-margin; a row of dots immediately within cilia tinged with ochreous, often indistinct, but always present; between it and row of spots a sinuate line of similar dots; base more or less clouded with dull-ochreous scales. *Hind-wing:* no spot near base; median band very much narrower than in *Vindex*; two rows of dots as in fore-wing, but inner one not sinuate and often almost obliterated. Cilia dull greyish-yellow, inconspicuously varied with fuscous. **UNDER-SIDE.**—*Fore-wing:* markings as above, but outermost row of dots wanting; costa widely coloured with pale greyish-yellow, apex with pale reddish-yellow. *Hind-wing:* ground-colour pale fuscous, tinged with reddish, crossed by two yellowish white stripes, commencing on costal nervure,—the first short, often indistinct, narrow, before middle,—the second median, conspicuous, oblique, uniting with an inner-marginal, longitudinal stripe to form a white space at anal angle; hind-margin widely tinted with dull-reddish, and edged with a pale line; rows of dots obsolete.

♀. *Paler, more conspicuously spotted; under-side of hind-wing reddish-ochreous, only tinged with fuscous next to stripes.*

Var. A (of both sexes). *Darker; all spots and cilia whiter, more distinct. UNDER-SIDE.*—*Hind-wing:* both streaks from costa itself, the median streak irregularly dentate; submarginal, sinuate row of dots indistinctly marked.

Bushy spots at bases and on slopes of hills.

September (b)—February (m). "March."—D'Urban.

This distinct little *Pyrgus* was common at Knysna, and is not rarely met with near Cape Town. The *variety* noted was taken in the vicinity of the latter place, and also at Vogel Vley. The insect, like its congeners, is fond of sitting with expanded wings on the ground or on stones.

Cape Town. Vogel Vley, Tulbagh. Knysna. Plettenberg Bay.—Coll. Tri.

King William's Town.—Coll. W. D'Urban.

180. *Pyrgus Elma*.

Pyrgus Elma, *Trimen, Tr. Ent. Soc.*, 3rd Ser., I, p. 288.

Exp. 10 lin.—1 in. 1 lin.

Dark-brown, varied with lighter, and with vitreous and white spots. Fore-wing: dark as far as middle, which is crossed by a curved blackish streak; beyond streak the wing is light-brown, with some darker shades and dashes; a vitreous streak closes cell, contiguous to blackish streak; near it, between first and third median nervules, two small vitreous spots, the lower one larger, quadrate; a transverse line of three contiguous, minute, vitreous spots on costa, not far from apex; cilia varied light and dark-brownish. *Hind-wing*: almost black; a small, round white spot in discoidal cell, near base; about middle, a conspicuous, rather wide, white band, from first subcostal nervule to submedian nervure; traces of a submarginal row of whitish dots; anal-angular region hoary; cilia whitish; varied greyish and dark-brown. *UNDER-SIDE*.—Rather glossy, *much paler*; dull brownish-ochreous. *Fore-wing*: vitreous marks as above; an indistinct submarginal row of whitish dots. *Hind-wing*: an additional white dot above that in cell, the two forming a short, transverse streak; white band commences on costa; whitish at anal angle, extending along inner-margin, sometimes conspicuous.

The ♀ is paler than the ♂.

Pyrgus Elma differs from all other South African species of the Genus I have seen in the presence of vitreous, and *want of white spots* in the fore-wings; but the hind-wings are quite like those of an ordinary *Pyrgus*.

Sandy spots and pathways in bushy places, outskirts of woods, &c.

September (m). November (b)—February (e). "October and March."—W. D'Urban, in litt.

Mossel Bay. Knysna. Plettenberg Bay. King William's Town (W. D'Urban).—Coll. Tri.

Bashee River, Kaffraria (J. H. Bowker).—Coll. S. A. Mus.

Cape of Good Hope.—Coll. of *Hesperidæ* (Boisduval's?) in Brit. Mus.

181. *Pyrgus Mohozutza*.

Hesperia Mohozutza, *Wallgr., Lep. Rhop. Caffr.*, p. 50.

Exp. 1 in.—1 in. 1 lin.

Blackish-brown: with creamy and fulvous spots. Fore-wing: costa and main nervures irrorated with ochreous to about middle; a quadrate creamy spot at extremity of discoidal

cell, succeeded by a sinuate transverse row of six smaller spots of the same colour (of which the three upper are separate from the others, forming one elongate streak on subcostal nervules); bordering hind-margin a row of elongate fulvous spots, becoming obsolete below second median nervule. *Hind-wing*: some ochreous hairs on median and submedian nervures; disco-cellular spot as in fore-wing, but, as well as hind-marginal row of spots (which extends to submedian nervure, *not* to anal angle), fulvous. Cilia broad, creamy, irregularly varied with ground-colour. **UNDER-SIDE.**—Costa and hind-marginal row of spots (which latter is in both wings a continuous broad band) *bright orange-fulvous*. *Fore-wing*: ground-colour not so dark; creamy spots less distinct. *Hind-wing*: ground-colour pale greyish-creamy, excepting for a dark space at anal angle, gradually narrowing along submedian nervure to base; two black spots at base, one on costa, the other between costal and subcostal nervures; discoidal cell bright orange-fulvous, divided about its middle by a black V, and exteriorly tipped with black; a stripe of the same colour, also black-tipped, extends from base to beyond middle, between median and submedian nervures: hind-marginal fulvous band internally edged with black, interrupted by creamy nervures.

This highly-ornamented species, though somewhat like a *Cyclopides* in colouring and general aspect, is quite a *Pyrgus* in structure and pattern. A ♂ specimen has the *upper-side of hind-wing entirely spotless*.

Mr. Bowker gives me the following note on its habits: "Very tame: found upon small flowers in the grass, open country, from January to April, 1863: not seen in 1862."

Bashee River, Kaffraria (J. H. Bowker).—Coll. Tri. et Coll. S. A. Mus.

Genus CYCLOPIDES.

Cyclopides, Hübn.
Steropes, Boisd.

IMAGO.—*Head* as wide as thorax, with tufts at bases of antennæ: *palpi* very hirsute, so that the terminal joint is almost hidden; *antennæ* as in *Pyrgus*, but the club more flattened laterally, shorter, more abruptly formed, and rather more acute at tip. *Thorax* short and slender for a Hesperian. *Wings* rather broad, truncate, entire. *Fore-wings* with costa slightly convex. *Hind-wings* large, *not* produced at anal angle. *Legs* slender, smooth; femora only slightly pubescent. *Abdomen* slender and elongate, extending as far as, or beyond, anal angle of hind-wings.

The insects of this small Genus are dark-brown, with conspicuous yellow spots. Two of the South African species are, however, unspotted, viz., *C. Lepeletierii* and *C. inornatus*, of which the former may readily be recognized by the two white striæ on under-side of hind-wing.

182. Cyclopides Metis.

Papilio Metis, *Linn., Syst. Nat.*, II, p. 792; and *Mus*
[*Lud. Ulr. Reg.*, p. 325.

„ „ *Dru., Ill. Nat. Hist.*, II, pl. 16, f. 3, 4.

„ „ *Wulfen, Capens. Ins*, p. 33, n. 32.

„ „ *Cram., Pap. Exot.*, pl. 162, f. G.

„ „ *Fab., Ent. Syst.*, III, 1, p. 528, n. 360.

Cyclopides Metis, *Hübner, Verz. Bek. Schmett.*, p. 112,
[n. 1205.

Steropes Metis, *Boisd., App. Voy. de Deleg.*, p. 594.

Heteropterus Metis, *Wallgr., Lep. Rhop. Caffr.*, p. 46.

Exp. 1 in.—1 in. 2 lin.

♂. *Dark purplish-brown, with orange-yellow spots. Fore-wing*: basal region irrorated with yellow scales in three rows, viz., on costa, below median nervure, and on inner-margin; two spots on costa about middle, the upper just above and partly beyond the lower (which is in cell); beyond middle, a transverse row of five spots, of which the second is beyond the line of the others, the third and fourth only separated by second median nervule, and the fifth (just above submedian) smallest and sometimes obsolete. *Hind-wing*: basal irroration confined to neighbourhood of median and submedian nervures; a large subquadrate spot at end of cell, with a smaller spot just below it; a submarginal row of seven or eight spots, of which the first, fourth, and fifth are the largest, and the last three ill-defined. *Cilia* of the ground-colour, but yellow near and at anal angle. **UNDER-SIDE**.—Paler, more glossy. *Fore-wing*: spots larger, paler; basal irroration forming a distinct streak on costa, and another in cell (the latter confluent with cellular spot). *Hind-wing*: unicolorous, excepting only a small yellow spot on costa near base. *Cilia* as above.

♀. *Brown without purplish tinge: spots paler, larger. Fore-wing*: spots in and above cell forming one marking; more irroration in cell. *Hind-wing*: the small spots of submarginal row very small, some or all of them occasionally wanting (in one example, the first spot is very small, and the only two others, the fourth and fifth, scarcely visible as dots).

Cilia yellow throughout in hind-wing, and at anal angle of fore-wing. UNDER-SIDE.—Hind-wing and apex of fore-wing marked with *ferruginous-ochreous*, which in the former broadly indicates the position of the spots of upper-side. *Fore-wing*: no cellular streak from base; cellular spot often confluent with third spot of transverse row.

Common. Woods, gardens, &c.

August (m)—April (e). June (b). "January to June."—D'Urban, in litt.

Metis is one of the first Cape butterflies to mark the approach of summer weather, and rarely appears in the winter months. It is an active little species, fond of settling on the leaves of low plants in sheltered situations, where its warm rich colouring shows to advantage.

Cape Town. Knysna. Plettenberg Bay.—Coll. Tri.

Graham's Town. King William's Town.—Coll. D'Urb.

Bashee River, Kaffraria (J. H. Bowker).—Coll. S. A. Mus.

South Africa. Port Natal.—Coll. Brit. Mus.

183. *Cyclopides* *Malgacha*.

Steropes *Malgacha*, *Boisd.*, *Faune Ent. de Mad.*, &c., p. 67.

Hesperia *Limpopona*, *Wallgr.*, *Lep. Rhop. Caffr.*, p. 50.

Exp. $11\frac{1}{2}$ lin.—1 in. 1 lin.

Allied to *C. Metis*, but smaller and paler.

♂. *Greyish-brown*, with small yellow spots arranged as in *Metis*. *Fore-wing*: basal irroration more evenly spread, not distributed in rows; two costal spots more separate; an indistinct submarginal row of small yellowish spots. *Hind-wing*: spots of submarginal row all small, those near costa commonly wanting. *Cilia* of *fore-wing* of the ground-colour slightly mixed with yellowish, of *hind-wing* yellow. UNDER-SIDE.—Hind-wing and apex of fore-wing *creamy greyish- or yellowish-ochreous*, the former with spots of upper-side marked in paler yellow-ochreous. *Fore-wing*: spots larger than above; costa and cell closely irrorated with yellow.

♀. *Duller, paler, spots larger*: *cilia* pale-yellowish throughout. UNDER-SIDE.—*Hind-wing*: spots more distinct.

A ♂ in my collection, captured near Cape Town, *wants all the spots in fore-wing* except the minute ones of submarginal row; on the *under-side*, however, the spots near costa are observable, but small and ill-defined.

Gardens and open ground.

September (m)—February (b).

Rarer than *C. Metis*, and much less conspicuous, whether at rest or on the wing, but with quite the same habits. I never saw it at Knysna, nor was it common at Plettenberg Bay.

Cape Town. Stellenbosch. Paarl. Plettenberg Bay.—Coll. Tri.

"Madagascar (Tamatave)."—Boisd.

184. *Cyclopides Lepeletierii*.

Hesperia Lepeletierii, *Godt., Enc. Meth.*, IX, p. 777.

Nisoniades Lepeletierii, *Doubl., Westw., Hewits, Gen. D.*
[*Lep.*

Exp. 1 in. 2 lin.—1 in. 4 lin.

Shining dark-brown, with a greyish tinge; spotless, unicolorous. Cilia grey on outer edge. UNDER-SIDE.—Hind-wing and costal and apical border of fore-wing *reddish-brown*; a thin white bounding line just before cilia. *Hind-wing: two longitudinal white streaks from base to hind-margin*—one passing through cell and along discoidal nervule,—the other (more suffused) along fold between third median nervule and submedian nervule; inner-marginal region below the latter streak fuscous-brown; space between the two streaks usually more or less irrorated with white.

"Common in grassy spots."—J. H. Bowker, in litt.

"Abundant in British Kaffraria."—W. D'Urban, in litt.

Swellendam, Breede River (L. Taats). King William's Town (W. D'Urban).—Coll. Tri.*

Bashee River, Kaffraria (J. H. Bowker).—Coll. S. A. Mus.

"Windvogelberg, Queen's Town."—D'Urban, in litt.

185. *Cyclopides inornatus*.

Cyclopides inornatus, miki. N. Sp.

Exp. 1 in.—1 in. 1 lin.

Dull-fuscous, unicolorous. Fore-wing: beyond middle, from costa, an oblique row of three indistinct, pale dots. Cilia dull-grey. UNDER-SIDE.—*Costa and apical region of fore-wing and whole of hind-wing reddish-brown*; a pale, disco-cellular dot, succeeded by a transverse row of similar more or less indistinct dots, in both wings, that of hind-wing strongly curved and commencing between costal and subcostal nervures. Cilia paler.

Three specimens of this dull-coloured little species, which resembles in size and colouring *Pamphila lugens* of Hopffer, were in Mr. Bowker's collection.

Bashee River, Kaffraria (J. H. Bowker).—Coll. Tri. et Coll. S. A. Mus.

* I have since taken a few specimens of this insect at Vogel Vley, in the month of October. It settles on stony ground and is easily captured.

186. *Cyclopides* ? *Willemi*.

Heteropterus Willemi, *Wallgr., Lep. Rhop. Caffr.*, p. 47.

Exp. 1 in. 3 lin.

♂. *Blackish-fuscous*. *Fore-wing*: a row of ovate-elongate, yellowish-white spots near hind-margin; before this row, another of the same colour (nearly as in *H. Aracanthus*, Fab.), but the spots more distinct. *Hind-wing*: spotless. *UNDER-SIDE*.—*Fore-wing*: costa marked with yellowish-white, especially near base; on hind-margin itself a row of yellowish-white spots, of which the apical ones are elongate, the rest ovate-rotundate, becoming fainter as they descend, so that scarcely a trace of this colour is visible at anal angle; on costa, between second and fourth subcostal nervules, two short lines, and on disc, between third subcostal and first discoidal nervules, three minute subquadrate spots of the same hue. *Hind-wing*: yellowish-white; a broad costal band, and two double transverse rows of lunules, fuscous, so that the ground-colour is divided into variously-shaped spots; a broad blackish-fuscous band along inner-margin, but the edge itself yellowish-white. Cilia fuscous above and below.

Translated from Wallengren's description.

"*Kaffraria* (Wahlberg)."—Wallgr.

† 187. *Cyclopides* ? *Menes*.

Papilio Menes, *Cram., Pap. Exot.*, pl. 393, f. H, I.

" " *Stoll, Suppl. Cram.*, pl. 7, f. G.*

Exp. 1 in. 1 lin.

Blackish-brown. *Fore-wing*: four elongate *pale-yellow dashes* from margin at apex. *UNDER-SIDE*.—*Paler*. *Fore-wing*: yellow dashes rather shorter and darker,—two additional ones on costa before the rest. *Hind-wing*: six deep-yellow, small, triangular spots on hind-margin. Tip of abdomen ochrey-yellow.

Described from Cramer's figures.

"*Cape of Good Hope*."—Cramer.

* Stoll figures the Larva as light-green, with a blackish head and dorsal line, and a whitish lateral line. The Pupa is represented of a pale-creamy tint.

Genus PAMPHILA.

Pamphila, *Fab.*
Hesperia, *Boisd.*

IMAGO.—*Head* as wide as thorax, with tufts at bases of antennæ; *palpi* thick, compact, closely and densely pilose, the terminal joint very short (sometimes scarcely perceptible); *antennæ* rather short, with a distinct, rather abruptly-formed club, ending (in many species) in a slender, acute, slightly recurved tip. *Thorax* very robust. *Fore-wings* prolonged and rather acuminate; costa very slightly hollowed about its middle; anal angle sometimes rather prominent. *Hind-wings* more or less prominently lobed at anal angle: costa very prominent at base. *Legs* rather long, with pubescent femora. *Abdomen* rather slender, usually not reaching as far as anal angle of hind-wings.

I have referred to this Genus twelve South African species, four of which, however, are doubtful members of it. In *P. Macomo*, *Lepenula*, and *niveostriga*, the tips of the antennæ are not recurved, but in all the others (*P. Poutieri* and *Havei* probably only, as I have not seen these species) the tips are more or less hooked.

188. Pamphila Macomo.

Cyclopides Macomo, *Trimen, Tr. Ent. Soc.*, 3rd Ser., I,
[p. 405.]

Exp. 1 in. 1 lin.—1 in. 3 lin.

♂. *Brown; with quadrate, ochreous-yellow spots.* *Fore-wing*: base yellow-scaled; a transverse row of three spots from extremity of cell to submedian nervure before middle; beyond middle, a row of six spots—three near apex, on subcostal nervules,—three larger, between first median nervule and submedian nervure. *Hind-wing*: a small, disco-cellular spot; beyond middle, between first subcostal nervule and submedian nervure, an irregular row of five spots, of which the second is much the largest, and the last indistinct. *UNDER-SIDE*.—*Creamy-yellow, tinged with greenish; with black dots.* *Fore-wing*: inner-marginal portion, from base, blackish, contrasting strongly with lowermost spots of outer transverse row; a minute, disco-cellular, black dot; a little behind it, four similar dots marking inner extremities of upper spots of outer transverse row; a submarginal row of four blackish dots, radiating to hind-margin. *Hind-wing*:

two black dots below costal nervure, one close to base, the other before middle; beyond middle, two nearly parallel, irregular rows of black dots, those of inner row sometimes rather larger, more irregularly placed.

♀. Similar; spots paler: wings more rounded.

"December 8th, 1860."—W. D'Urban, in litt.

Mr. D'Urban discovered this pretty species, having taken a single specimen in British Kaffraria. Mr. Bowker has since captured several examples in the Transkeian territory.

King William's Town.—Coll. W. D'Urban.

Butterworth and Bashee River, Kaffraria (J. H. Bowker).—Coll. Tri, et Coll. S. A. Mus.

189. *Pamphila* ? *Lepenula*.

Hesperia Lepenula, Wallgr., *Lep. Rhop. Caffr.*, p. 50.

♂. Exp. 1 in. 2 lin. (about).

Fore-wing: yellowish-fulvous; a broad fuscous fascia on hind-margin, denticulate interiorly between first median nervule and submedian nervure; beyond cell, an irregular fuscous fascia from costa to submedian, joined to costal border by an elongate fuscous spot on second discoidal nervule (so that a rather large spot of the ground-colour is isolated near apex), and emitting a short dash towards marginal fuscous between third median and submedian. *Hind-wing*: fuscous; a very large, triangular, yellowish-fulvous spot occupying disc between second subcostal and second median nervules, and extending towards base, denticulate on its outer edge, and clouded with dull-fuscous at end of cell, UNDER-SIDE.—Yellow, nearly as in *P. Lineola*, but unicolorous. *Fore-wing*: inner-margin fuscous at base. Cilia yellow above and below, but whitish on upper-side of fore-wing.

Head with yellow hairs: palpi black above, yellow beneath; antennæ fuscous. Abdomen black above, with yellow incisions, beneath yellow. Breast and legs yellow.

Translated from Wallengren's description.

"Kaffraria (Wahlberg)."—Wallgr.

190. *Pamphila* ? *niveostriga*.

Pamphila ? *niveostriga*, *mihi*. N. Sp.

Exp. 1 in, 2 lin.—1 in. 3 lin.

♂. *Fuscous-brown; fore-wing with white spots. Fore-wing: costa tinged with dull-ochreous; an elongate, sub-reniform spot about extremity of discoidal cell; beyond it, a strongly inward-curved row of six more or less quadrate spots, commencing below costa, of which the two first spots are small and contiguous, the third all but obsolete, the fifth largest and just below spot in cell, and the sixth (above submedian nervure) somewhat suffused and invaded by ground-colour. Hind-wing: darker, spotless. UNDER-SIDE.—Wholly, excepting inner-marginal region of fore-wing, pale reddish-ochreous, marked with paler creamy nervures (quite like the Noctuæ of the Genus *Leucania*); on inner-margin of hind-wing a glistening, snow-white border, edged interiorly (along deep fold of wing) with blackish. Fore-wing: only three spots, viz., that in cell, and the fourth and fifth of transverse row; fuscous greyer, paler. Cilia broad, above and below dull-greyish.*

It is with doubt that I refer this very singular Hesperian to the Genus *Pamphila*. The fore-wings are unusually acuminate; the antennæ (which are white-ringed) remarkably stout, with a thick, very gradually-formed, very slightly outward-curving club; the palpi very long, more hairy than in *Pamphila*, with the terminal joint blunt, and far exserted; and the abdomen as long as hind-wings.

Two specimens contained in Mr. Bowker's collection.

Bashee River, Kaffraria (J. H. Bowker).—Coll. S. A. Mus.

191. *Pamphila Poutieri*.

Hesperia Poutieri, *Boisd.*, *Faune Ent. de Mad.*, p. 65.

„ „ „ *App. Voy. de Deleg.*, p. 594.

“Nearly the size of* *P. Comma*, Linn. *Blackish-brown; cilia a little paler. Fore-wing: about middle, two small, transparent, white dots, often preceded towards apex by a much smaller dot of the same colour, scarcely visible. Hind-wing: spotless. UNDER-SIDE.—Hindwing and costa of fore-wing dull-yellowish; the former with two small, indistinct dots, close together, of which one is sometimes wanting. Body yellowish-brown beneath. Head and thorax clothed with some greenish-yellow hairs. Antennæ brown above, whitish beneath, with the end of the club blackish.*—*Boisd. transl.*

“Natal. Madagascar (Tintingue, Foule Pointe, Ste. Marie).”—*Boisd.*

* Exp. 1 in. 2 lin. – 1 in. 4 lin.

192. *Pamphila Havei*.

Hesperia Havei, *Boisd.*, *Faune Ent. de Mad.*, p. 64.

„ „ „ *App. Voy. de Deleg.*, p. 594.

“Size and habit of* *P. Linea*, W. V. *Brown-black: cilia rather greyish. Fore-wing*: a central vitreous-white spot, preceded exteriorly by a very small, scarcely visible, white dot. *UNDER-SIDE*.—*Paler, greyish-brown. Fore-wing*: towards apex a curve of three small, white, transparent dots, very faintly marked. *Hind-wing*: about middle, a short, transverse, brown band, upon which is a line of small transparent dots, scarcely distinct; another larger dot towards costa. Body same colour as wings. Antennæ brownish above, yellowish-white beneath, with the anterior half of the club darker.”—*Boisd. transl.*

“Port Natal. Madagascar.”—*Boisd.*

193. *Pamphila Letterstedti*.

Hesperia Letterstedti, *Wallgr.*, *Lep. Rhop. Caffr.*, p. 49.

Hesperia Namaqua, *Boisd. MS.* (in Coll. Hesp., Brit. Mus.)

? *Hesperia Hottentota*, *Godt.*, *Enc. Meth.*, IX, p. 777.

Exp. 1 in. $\frac{1}{2}$ lin.—1 in. 3 lin.

♂. *Greyish-brown, more or less tinged with greenish-yellow from bases. Fore-wing*: near costa, towards apex, two minute, contiguous yellow dots, scarcely visible; beyond and below them, two similar dots. *Hind-wing*: spotless. *UNDER-SIDE*.—*Hind-wing, and costal and apical region of fore-wing, yellow tinged with green. Fore-wing*: inner-marginal portion pale-greyish; a short blackish dash in cell from base; yellow spots apparent, forming the first part of an interrupted transverse row of six, inclining inwardly from first discoidal to third median nervule. *Hind-wing*: an abruptly-angulated row of confluent, elongate spots, of a paler yellow than ground-colour, and with a dark edging on both sides, from costal nervure about middle to discoidal nervule close to hind-margin, and thence to about middle of submedian nervure; below this nervure the inner-margin is grey, except on edge which is yellow. *Cilia* brownish-grey: whitish at anal angle.

* Exp. 1 in. 1 lin.—1 in. 3 lin.

♀. *Rather darker. Fore-wing:* discal row of spots pale-yellow, conspicuous, arranged as on under-side of ♂, with an additional spot just above submedian nervure. *Hind-wing:* a discal row of three or four suffused yellow spots, representing that of underside of ♂. **UNDER-SIDE.**—As in ♂, but yellow brighter, and markings more distinct.

Var. ♂.—A strong ochrey-yellow suffusion covers nearly whole of hind-wing and basal and inner-marginal region of fore-wing. **UNDER-SIDE.**—Markings rather indistinct. *Fore-wing:* considerably paler on inner-margin than in type specimens. *Hind-wing:* no grey on inner-marginal region, which is pale-yellowish.

I have very little doubt that Godart's *Hottentota* is the *Variety* just characterised; but as Godart does not describe the under-side of the insect, I am unable to decide that such is the case.

Open ground, hillsides, &c.

September (e)—March (c). "August to May."—D'Urb. in litt.

This active little *Pamphila* is not very common near Cape Town, but I found it abundantly at Knysna. It haunts little hollows and kloofs in hillsides, taking possession of some tall flower in an open position, and, like its British congeners *P. Sylcanus* and *Linea*, driving away every insect which attempts to share its seat. All the ♂s I have taken near Cape Town belong to the yellow-suffused *Variety*, which is also found near the Bashee River. An intermediate ♂ has been sent to me from Graham's Town.

Cape Town. Vogel Vley. Knysna. Graham's Town
(H. J. Atherstone.—Coll. Tri.

Bashee River, Kaffraria (J. H. Bowker).—Coll. S. A. Mus.

194. *Pamphila* Zeno.

Pamphila Zeno, *mihl*. N. Sp.

Exp. 1 in. 5 lin.

♀. *Dark-brown, with orange-yellow spots. Fore-wing:* a large, irregularly-shaped, disco-cellular spot; beyond middle an interrupted, irregular, transverse row of nine spots, of which the first three form one marking close to costa, the fourth and fifth are small and nearest of the row to hind-margin, the sixth and seventh largest and (with the small eighth) contiguous, the ninth being above submedian nervure and in a line below spot in cell; basal portion scaled with orange-yellow. *Hind-wing:* same pattern as fore-wing: disco-cellular spot smaller, divided by fold; transverse row composed of six contiguous spots, commencing some distance from costa, and reaching to submedian nervure,—the second spot the largest. Cilia brown;

orange-yellow at anal angles. UNDER-SIDE.—*Fore-wing*: spots as above, but much paler; costal and apical regions yellow with a greenish tinge. *Hind-wing*: spots uniting with costal and hind-marginal colouring to form a pale-yellow ground-colour, on which the portions dark on upperside take the form of a median and submarginal macular fuscous band,—the latter, incomplete band joining a wide blackish space at anal angle, which narrows gradually to base along inner-marginal fold; inner-margin itself bordered with ground-colour; three small fuscous spots form a short transverse row near base.

Above, this species bears much resemblance to Hopffer's East African *P. Herilus*, but wants the longitudinal inner-marginal yellow streak in both wings, as well as some yellow lines on costa of fore-wing: beneath, however, its markings are very different, especially as regards the anal angles, which are fuscous in both wings, while in *P. Herilus* they are respectively whitish and pale-yellow.

Described from a single specimen in Mr. Bowker's collection.

Bashce River, Kaffraria (J. H. Bowker).—Coll. S. A. Mus.

195. Pamphila ? Edipus.

Papilio Edipus, *Cram., Pap. Exot.*, pl. 366, f. E, F.

Exp. 1 in. $4\frac{1}{2}$ lin.

Brown, with ochreous markings and vitreous spots. Fore-wing: a costal stripe from near base, ending abruptly at extremity of cell where it joins a good-sized quadrate spot marked with two small vitreous spots; this spot being part of a band (interrupted on first median nervule) which is marked with two other vitreous spots above second median and reaches inner-margin, where it is joined by an indented stripe from base; near apex, two elongate spots, the upper of which includes a vitreous dot. *Hind-wing*: a short, abruptly upward-angulated streak from base; a large ovate patch on disc; an anal-angular marginal streak. UNDER-SIDE.—*Fore-wing*: costal stripe broader at base and produced as far as apical spot; a macular streak just within hind-margin, and two dots immediately before it. *Hind-wing*: *ochreous*; seven black spots in basal portion; and two submarginal rows of black spots, interrupted in their central part. Tip of abdomen whitish beneath.

Described from Cramer's figures.

"Cape of Good Hope."—Cramer.

† 196. *Pamphila Erinnyis*.

Pamphila Erinnyis, *Trimen, Tr. Ent. Soc.*, 3rd Ser., I, p. [290.

Exp. 2 in.—2 in. 1 lin.

Dark-brown; with yellow-ochreous and vitreous spots. Fore-wing: from base, along inner-margin, a clothing of short, yellow hairs; two small, quadrate, vitreous spots in, and near extremity of discoidal cell; three small similar spots form a short streak from costa, between middle and apex; below them, from origin of first median nervule to sub-median nervure, a row of three larger, vitreous spots (the lowest tinged with yellow) inclining towards middle of inner-margin. *Hind-wing*: clothed with yellow hairs from base; an angulated, transverse, macular, yellow-ochreous band from near costa to middle of sub-median nervure,—the first three spots separate; a yellow space at anal angle, extending narrowly along hind-margin. **UNDER-SIDE.**—*Paler. Fore-wing*: a whitish mark on costa, above discocellular vitreous marks; a dentate, sub-marginal, pale yellow-ochreous streak from costa; other markings as above; in apical region, between dentate streak and vitreous spots, an irroration of bluish scales. *Hind-wing*: *two white (or pale, dull-ochreous) macular bands* across central region; some scattered spots at base; anal-angular and marginal yellow-ochreous marking paler than above; parallel to hind-margin, except near anal angle, an ill-defined stripe of bluish atoms.

Mr. Bowker sends me the following interesting remarks on this "Hermit" Skipper (as he styles it): "A curious fellow; only found on the rocky banks of a forest stream; in the most gloomy dark corners, where you would only expect to find a spider or a frog, he will bolt out like a shot and settle on the face of a rock under a bunch of moss or ferns:—rare January."

Bashee River, Kaffraria (J. H. Bowker).—Coll. S. A. Mus.
Port Natal.—Coll. Brit. Mus.

197. *Pamphila Borbonica*.

Hesperia Borbonica, *Boisd., Faune Ent. de Mad.*, pl. 9, [f. 5, 6.

♂. *Pamphila Fatuellus*, *Hpf., Monatsb. Kon. Pr. Acad.* [1855, p. 643.

„ „ *Hpf., in Peters' Reise nach* [Mossamb.,—pl. 27, f. 3, 4.

Hesperia Fatuellus, *Wallgr., Lep. Rhop. Caffr.*, p. 48.

Exp. 1 in. 5 lin.—1 in. 8 lin.

♂. *Glossy-brown, tinged with olivaceous; with vitreous spots.* *Fore-wing*: beyond middle, a transverse row of seven spots (of which the first three are minute, costal, and forming one narrow streak—the other four larger, separate, the sixth being the largest, and the fourth, which is just above submedian, tinged with yellowish), abruptly angulated inwardly on first median nervule. *UNDER-SIDE*.—*Paler; hind-wing and border of fore-wing strongly tinged with olivaceous.* *Fore-wing*: spots as above. *Hind-wing*: beyond middle, a row of three small white, thinly fuscous-ringed spots, between first subcostal and third median nervules.

♀. *Similar; vitreous spots larger.* *UNDER-SIDE*.—Olivaceous colouring more yellowish.

A ♀ specimen in the South African Museum wants all the vitreous spots of *fore-wing* but the third, fifth, and sixth; and the two lower spots of those on under-side of *hind-wing* are visible on the upperside. The olivaceous of underside has an ochreous tinge. There is no doubt that Hopffer's *Fatuellus* is the same species as Boisduval's *Borbonica*. Wallengren (*loc. cit*) distinguishes the former solely by the whiteness of the spots on under-side of *hind-wing*, which is a marked character of *Borbonica* in the figures in "Faune Ent. de Mad.," though it is true that Boisduval has omitted to state the colour of the spots in his description. The latter author notes the species as common in Mauritius and Bourbon.

"Kaffraria (Wahlberg)."—Wallgr.

Mauritius (E. L. Layard)—Coll. S. A. Mus.

"Bourbon. Mauritius."—Boisd.

"Querimba."—Hopffer.

198. *Pamphila Mohopaani*.

♀. *Hesperia Mohopaani*, Wallgr., *Lep. Rhop. Caffr.*, [p. 48.]

Pamphila Micipsa, Trimen, *Tr. Ent. Soc.*, 3rd Ser., I, [p. 290.]

Exp. 1 in. 5 lin.—1 in. 8 lin.

Nearly allied to *P. Borbonica*, Boisd.

♂. *Paler, more irrorated with greenish.* *Fore-wing*: transverse row of spots not so abruptly elbowed; the spots much smaller (the first three not in a straight line, and the last replaced by an oblique, smooth, greyish streak); in discoidal cell, two other vitreous spots, one above the other. *Hind-wing*: two vitreous dots between second subcostal and first median nervule. *UNDER-SIDE*.—*Hind-wing*: a white dot in cell, near base; from two to five dots beyond middle.

♀. *Similar.* *Fore-wing*: in place of discal streak, one or two small vitreous spots.

The differences here noted abundantly distinguish this species from *P. Borbonica*. It is singular that, in two species so closely allied as these obviously are, so marked a character as the discal streak of the ♂ should be altogether wanting in the one insect while it is strongly defined and unvarying in the other.

Waste grounds, gardens, &c.

October (c). December (m). February. April (b)

I found this *Pamphila* very scarce at Knysna, but it is not uncommon at Wynberg, near Cape Town. I met with many specimens at Constantia in a spot planted with vetches, the flowers of which are most attractive to butterflies and other insects.

Cape Town. Knysna. Damaraland (J. A. Bell).—Coll. Tri.

Bashee River, Kaffraria (J. H. Bowker).—Coll. S. A. Mus.

199. *Pamphila* ? *Moritili*.

Hesperia Moritili, Wallgr., *Lep. Rhop. Caffr.*, p. 49.

♀. Exp. 1 in. 4 lin.

Fuscous-black. *Fore-wing*: along inner-margin, from base to about middle, a *longitudinal yellowish stripe*, broader outwardly; in cell two rather minute oblong-ovate spots, and another larger lunate spot a little beyond them,—all three white-vitreous; before submedian nervure, and before end of inner-marginal stripe, a minute triangular yellow spot; these spots form a row, interrupted below third median nervule; between end of cell and apex four quadrate white-vitreous spots, at equal distances, forming a row between first and second discoidal nervules. *Hind-wing*: hind-margin moderately sinuated; beyond cell a row of white spots (between second subcostal and third median nervules) minute, subquadrate, separated only by nervules, the first spot least and almost isolated. *UNDER-SIDE*.—*Fuscous, submetallic* in some lights. *Fore-wing*: only black on disc; markings as above, but inner-marginal stripe wanting. *Hind-wing*: spots nearly as above, but more separated, smaller, and less apparent (being situated in a whitish space) the last spot distinct and largest. Cilia pale-fuscous, whitish towards anal angle.

Wallengren thinks this species the type of a new Genus, the head and thorax projecting far before the wings, and the abdomen, sphingiform, extending beyond the expanded hind-wings. The fore-wings have an acute apex.

“Kaffraria (Wahlberg).”—Wallgr.

Genus LEUCOCHITONEA.

Leucochitonea, Wallgr.

IMAGO.—*Head* not so wide as thorax, with tufts at bases of antennæ: *antennæ* rather short, with a rather gradually-formed, cylindrical, obtuse-ending club; *palpi* with last joint short, naked, obtuse, exerted a little beyond pubescence of second joint. *Thorax* shorter than abdomen, not very robust. *Fore-wings* elongate: costa nearly straight, but little arched at base; hind-margin entire; inner-margin straight. *Hind-wings* rounded, slightly prominent at anal angle; costa at base very convex, thence nearly straight. *Legs* rather slender: tibiæ smooth; fore coxæ tufted with hair. *Abdomen* not extending to anal angle of hind-wings.

Wallengren has founded this Genus on a single species discovered by Wahlberg, which is white with narrow black edges to the wings. The generic name does not apply well to the colours of the species I have added, *L. bicolor*, which is yellow with black markings.

200. Leucochitonea Levubu.

Leucochitonea Levubu, Wallgr., *Lep. Rhop. Caffr.*, p. 52.

Exp. 1 in. 4 lin.—1 in. 5 lin.

White, with narrow black margins. Fore-wing: costa and hind-margin rather narrowly edged throughout; a sub-marginal black streak, slightly converging towards hind-marginal black, and becoming obsolete about submedian nervure; before this, a curved black streak from costa beyond middle extends to 1st median nerule, where it joins submarginal streak; *all nervules, between curved streak and costa and hind-margin, clouded with black*, as well as (more slightly) those in lower half of wing, near hind-margin. *Hind-wing*: hind-margin with a narrow edge, becoming broad at anal angle, whence it radiates on nervules (chiefly along submedian nervure, which is clouded throughout. **UNDER-SIDE**.—As above. *Hind-wing*: inner-margin edged with black; a black streak between it and submedian nervure; median nervules black towards hind-margin—especially the third, between which and submedian nervure is a black ray; *a broad black clouding conspicuously marks basal half of costal nervure*. *Cilia* white, black-spotted at ends of nervules: at anal angle wholly white.

Four specimens of this remarkable "Skipper" were brought from Damara Land by Mr. John A. Bell. Wallengren notes this species as allied to *P. niveus* of Cramer, which is easily distinguished from *Leruba* by its simple, much broader hind-marginal, and narrower costal, edging of forewing, the former only shortly indenting the ground-colour on nervules.

"*Kaffraria* (Wahlberg)."—Wallgr.

Damara Land (J. A. Bell).—Coll. Tri.

201. *Leucochitonea bicolor*.

Leucochitonea bicolor, *mihi*, N. Sp.

Exp. 1 in. 5 lin.

♂. *Very pale ochreous-yellow, with black margins: forewing with large black spots. Fore-wing: costa with a black border, narrowing to apex, where it joins the broad, interiorly irregularly-dentate, hind-marginal black band; inner-margin also narrowly bordered with black; close to base, between median and sub-median nervures a large spot; a little beyond it two large spots form an oblique fascia between costal border and sub-median nervure; a large irregular costal spot or patch between middle and apex reaches second median, and its outermost angle joins hind-marginal border on first median, nervule, leaving an oblique apical band of yellow, crossed by four dark nervules. Hind-wing: spotless; inner-margin broadly black-bordered throughout; a moderately-wide hind-marginal border, broader towards anal angle, radiating on nervules, and emitting a long black ray between third median nervule and sub-median nervure, where it is also marked with two yellow dots. UNDER-SIDE.—All of a deeper-yellow, with only very narrow blackish edgings to wings, excepting on inner-margin of hind-wing: where however, the border is narrower, shorter (only reaching anal angle by a thin streak), and enclosing interiorly a yellow stripe. Fore-wing: spots forming fascia only represented; spot near base and beyond middle only indicated by some fuscous scales. Cilia blackish above and below, with a few whitish hairs at anal angle of hindwing,*

I have placed this species in Wallengren's genus *Leucochitonea*, the structural differences it presents from *L. Leruba* being but slight, and not sufficient to warrant the formation of a new genus. The antennæ have a slightly longer club, but otherwise they and the palpi well agree with those of the genus named; and the hind tibiæ are tufted with hair. The thorax appears rather more robust, and slightly longer in proportion to the abdomen; and the anal region of hind-wing is more prominent. In

colouring and marking, *L. bicolor* seems to be very similar to *Hesperia Lepenula*, Wallgr., but the latter wants the central fascia and basal spot of forewing, and its describer mentions no black bordering except that of hind-margin, and notes, beside other differences, that the legs of *Lepenula* are yellow as well as the cilia, both of which are black in *Bicolor*.

A single specimen of this handsome and conspicuous "Skipper" was in the collection of Lepidoptera sent to the South African Museum by Mr. Bowker. It was taken in January, on the edge of a forest.

Bashee River, Kaffraria (J. H. Bowker).—Coll. S. A. Mus.

Genus CAPRONA.

Caprona, Wallgr.

IMAGO.—*Antennæ* short, with an abrupt, thick, cylindrical, obtuse, strongly re-curved club; *palpi* thick, moderately long, densely pilose, the last joint very short, blunt and naked. *Thorax* thick, as long as abdomen (in ♂ rather longer). *Fore-wings* somewhat elbowed on first median nervule, the hind-margin being slightly concave below third median, so that anal angle is well marked: costa nearly straight, but little curved at base; apex acute; inner-margin concave. *Hind-wings angulated* between first and second sub-costal, and more prominently between first and second median, nervules; anal angle prominently lobed; discoidal nervule wanting, Discoidal cells of both wings closed. *Hind femora* and *fore coxæ* with long hairs. *Abdomen* not so long as hind-wings; thick and blunt in ♀.

Like *Leucochitonea*, this Genus of Wallengren's creation is founded on a single species, to which I am able to add the allied, but very distinct, *C. Canopus*, mihi. The ground-colour of *Canopus* is white, while that of *Pillaana* is brownish-grey; both insects being marked with transparent spots. The angulated hind-wings at once distinguish the *Caproni* from all known South African *Hesperidæ*.

202. Caprona Pillaana.

Caprona Pillaana, Wallgr., *Lep. Rhop. Caffr.*, p. 51.

Exp. 1 in. 6 lin.

♀. *Brownish-grey, with lighter hind-margins: some vitreous markings* in fore-wing. *Fore-wing*: darker in basal region; a central vitreous fascia, from costa (commencing with a sub-vitreous spot) to sub-median nervure, thinly black-edged on both sides, very irregular in shape, broadest and clearest just beneath median nervure, and interrupted on third median nervure, below which is only a small

irregular spot; just beyond fascia, a small vitreous spot marking junction of first and second median nervules, and a transverse row of suffused blackish-brown spots from the former nervule to sub-median nervure; on costa, between fascia and apex, an oblique vitreous marking crossed by four nervules, and followed by some brownish-black clouding; a sub-marginal brownish fascia, to which succeeds the rather narrow, but even, pale hind-marginal border. *Hind-wing*: dark basal region well defined; a broad, central, sub-diaphanous fascia, marked by a double grey streak at end of cell, and outwardly by a fascia of ground-colour (of which a small portion forms a spot near costa); ground beyond this slightly tinged with ferruginous; border as in fore-wing, but paler. **UNDER-SIDE.**—*Fore-wing*: dingy yellowish-whitish; vitreous marks brownish-edged; a pale-ferruginous spot close to apex, and a suffused stain of that colour at anal angle. *Hind-wing*: yellowish-white; a sub-marginal, suffused brownish fascia, before which are some thin, very indistinct brownish lineolæ. "Cilia of ground-colour: in fore-wing indistinctly fuscous-spotted at ends of nervules."—(Wallgr.)

Described from a single specimen collected in Damara Land by Mr. J. A. Bell.

"Kaffraria (Wahlberg)."—Wallengren.

Damara Land (J. A. Bell).—Coll. Tri.

203. *Caprona Canopus*.

Caprona Canopus, *mihi*, N. Sp.

Exp. 1 in. 4 lin.—1 in. 7 lin.

Semi-transparent creamy-white, with vitreous bands and spots: base in both wings, and apical region of fore-wing, ferruginous-ochreous. *Fore-wing*: basal ochreous rather broad, well-defined, irrorated with fuscous atoms; touching it, in discoidal cell a sub-vitreous spot, separated by a fuscous-ochreous line from a sub-vitreous band of three contiguous spots between sub-costal and sub-median nervures; a broad median vitreous band of six spots (of which the two costal are sub-linear, the two central large and sub-quadrate, and the two lower small and irregular in shape) extends from costa to sub-median and is edged internally by a thin fuscous-ochreous line, and externally by the fuscous-ochreous of apical patch, which encloses a small, round, vitreous spot between first and second median nervules; colouring nearer apex itself pale-ferruginous, enclosing a short vitreous streak of four spots, on costa, and

two pale indistinct lines, hind-marginal and sub-marginal; a wavy streak of fuscous-ochreous reaches inner-margin, leaving anal angle white; between apical and central vitreous some ill-defined, elongate, blackish marks; continuous of transverse line of apical vitreous, three or four blackish spots. *Hind-wing*: basal fuscous-ochreous as in fore-wing; first sub-vitreous band of fore-wing continued to sub-median nervure or inner-margin; outer band irregular, narrow, merged with inner on costa, and only reaching third median nervule; cell closed by a fuscous-ochreous streak, succeeded by a transverse macular row of the same hue quite across wing to inner-margin, where it much widens and is sometimes joined to an outer, parallel, incomplete, ochreous shade; inner-marginal region fringed with long hairs, densely so in ♂; a hind-marginal fuscous-ochreous bounding line. *UNDER-SIDE*.—*White purer*: basal colouring wholly absent. *Fore-wing*: apical colouring very much paler, not varied with dark spots. *Hind-wing*: vitreous markings indistinct; ochreous stripes almost obsolete, but a conspicuous black spot, in fold of inner-margin near anal angle, marking termination of outer one. Cilia broad and white in hind-wing; narrow and brown-and-white in fore-wing.

The inner-margin of fore-wing is not so deeply excised in this species as in *C. Pillaana*, Walgr., nor are the angles of hind-wing quite so prominent. Four specimens (two of each sex) before me present no noticeable variation of marking.

We owe the discovery of this fairy-like species to Mr. Bowker, who notes it as rare, and writes as follows regarding its flight: "A curious flyer, rapidly opening and shutting the wings (like a bird), with a sharp creaking or buzzing noise. When at rest, keeps its upper wings nearly erect, while the lower are expanded."

Bashee River, Kaffraria (J. H. Bowker). Natal (W. Guenzius).—Coll. Tri. et Coll. S. A. Mus.

Genus NISONIADES.

Nisoniades, Hübn.

Thanaos, Boisd.

Pterygospidea, Wallgr.

IMAGO.—*Head* not so wide as thorax: *palpi* rather short, the terminal joint short and but little projecting beyond hairs and scales of second joint; *antennæ* rather long, the club rather gradually thickened, angulated (not hooked), and tapering to a point. *Fore-wings* with costa moderately

convex: hind-margin entire or very slightly denticulate. *Hind-wings* much rounded; costa very prominent at base; hind-margin more or less dentate. *Legs* rather long, coxæ and femora and hind tibiæ very hairy. *Abdomen* not reaching to anal angle of hind-wings.

The seven South African species that I have included under this Genus are all rather dull in colouring, and all have transparent markings in the wings. The most cheerful-looking is *N. Mokeezi*, in which the yellow hue of the sub-vitreous bands relieves the brown of the general surface. *N. Kobela* is very dark, and the largest of the seven species; the smallest being *N. Djælælæ*.

204. Nisoniades Djælælæ.

Pterygospidea Djælælæ, Wallgr., *Lep. Rhop. Caffr.*, p. [54, n. 5.

Nisoniades Umbra, Trimen, *Tr. Ent. Soc.*, 3rd Series, I, [p. 289.

Exp. 1 in.—1 in. $\frac{1}{2}$ lin.

Dark-brown, dusted with yellowish and whitish scales; a few small vitreous spots. Fore-wing: a conspicuous darker triangle,—its broad base on inner-margin, its apex on costal nervure,—a little before middle; on the outer edge of this marking are a sub-diaphanous spot close to costa, and a vitreous litura (like a ? reversed) bordering it between first median nervule and sub-median nervure; a smaller dark triangle on costa rather beyond middle, its base on first median nervule, outwardly edged by a line of three small vitreous dots; traces of a sub-marginal dark streak from apex; *cilia* greyish, interrupted with dark-brown. *Hind-wing:* a vitreous or sub-diaphanous dot about extremity of discoidal cell, sometimes obsolete traces of two darker fasciæ about middle; *cilia* as in fore-wing. *UNDER-SIDE.*—*Dull-ferruginous;* vitreous spots as above. *Fore-wing:* edges only of dark triangles faintly indicated; about extremity of cell a brighter, almost orange space. *Hind-wing:* fasciæ more distinct, sometimes well-marked.

On the hind-margin of fore-wing there is a shallow concavity between third median nervule and sub-median nervure, and on that of hind-wing a deeper one between discoidal and first median nervules. The hind-margin of both wings is generally more dentate than in others of the genus.

Hillsides, settling on stony footpaths.

February. "August to December; March."—W. D'Urban, in litt.

I found this species not common at Plettenberg Bay, but Mr. D'Urban notes it as abundant in British Kaffraria, and it appears to be common further to the East. Its habits closely resemble those of the European *N. Tages*, Linn.

Plettenberg Bay. King William's Town (W. D'Urban).—Coll. Tri.

Butterworth and Bashee River, Kaffraria (J. H. Bowker).—Coll. S. A. Mus.

205. *Nisoniades Kobela*.

Nisoniades Kobela, *mihi*, N. Sp.

Exp. 1 in. 5 lin.—1 in. 10 lin.

Dusky blackish-brown, here and there clouded with paler scales; with small vitreous, and indistinct larger black spots: in both wings a disco-cellular spot, and a transverse row of spots. *Fore-wing:* cellular spot encloses a vitreous dot, often wanting in ♂; transverse row beyond middle much elbowed on discoidal nervules, composed of nine spots, the three first of which (on costa) are always vitreous, the fourth and fifth black only and nearer margin than the rest, the others more or less markedly vitreous-centred; between third median nervule and submedian nervure, near base, a large black spot, indistinct, sometimes pale-centred in ♀; beyond transverse row and also along hind-margin some faint-yellowish scaling. *Hind-wing:* spots without vitreous centres; transverse row more regular than in fore-wing, of six or seven spots. **UNDER-SIDE.**—Rather paler, more glossy; spots more distinct, but smaller. *Fore-wing:* inner-margin bordered with dull-greyish; a dark streak, rather than spot, closing cell; spot near base obsolete. *Hind-wing:* a double streak closing cell; spots of transverse row bounded outwardly and often centred with dull-yellowish scales. Cilia of fore-wing fuscous, indistinctly mixed with greyish-yellow near anal angle; of hind-wing conspicuously *greyish-yellow interrupted with fuscous:* paler beneath.

In the ♂, which is darker than the ♀, the spots are often very indistinct, but when all others are scarcely distinguishable, and without a trace of vitreous centres, the three vitreous dots on costa are invariably well marked. In marking the species resembles the ♂ of *N. Sabadius*, Boisd. (*Nottoana*, Waller), but very much exceeds it in size.

This large and sombre Hesperian is met with in the thick forests of the Bashee River, where its habits are reported by Mr. Bowker to be quite similar to those of its more gaily coloured congener, *N. Mokeezi* of Wallengren. Though rare in 1862, Mr. Bowker reports it as common in 1863, but restricted to certain localities.

Bashee River, Kaffraria (J. H. Bowker).—Coll. Tri. et Coll. S. A. Mus.

206. Nisoniades Motozi.

Pterygospidea Motozi, *Wallgr., Lep. Rhop. Caffr.*, p. 53.

Nisoniades Pato, *Trimen, Tr. Ent. Soc. Lond.*, 3rd

[Series, I, p. 404.

Exp. 1 in. 3 lin.

Shining grey-brown, indistinctly varied with yellowish; marked with vitreous spots. Fore-wing: a reniform vitreous spot closing discoidal cell; a smaller, rounded spot just above it; three minute, contiguous spots forming a short transverse line, on subcostal nervules near apex; between first and third median nervules, two good-sized spots, the lower one the larger. *Hind-wing:* an ovate vitreous spot closing discoidal cell. On the inner edge of the vitreous spots, and at apex of both wings, some darker brown clouding, in one example very strongly marked. UNDER-SIDE.—Vitreous spots as on upper-side; yellow variegation much more conspicuous, especially in hind-wing. *Fore-wing:* base yellow-dusted; an indistinct yellow mark immediately above spots on median nervules; along hind-margin a yellow, submacular band. *Hind-wing:* two or three yellowish spots near base; about middle, an irregular, macular, yellow streak; beyond it, another similar streak, merged with hind-marginal yellow except near apex.

"April 4th, 1861."—D'Urb. in litt.

Belongs to the same group as *N. Ophion*, Dru., and *Sabadins*, Boisd., but is readily distinguished by the yellow variegation and vitreous spot in *hind-wing*. It appears to be rare, Mr. D'Urban having only met with a single specimen, and Mr. Bowker's collection containing but two or three examples. The latter notes it as "rare, found in forest, near water, lighting with open wings upon long grass, sedges, or ferns; February."

Pluto's Vale, Fish River Bush.—Coll. W. D'Urban.

Bashee River, Kaffraria (J. H. Bowker).—Coll. Tri. et Coll. S. A. Mus.

"Natal (Coll. W. C. Hewitson)."—W. D'Urb. in litt.

207. Nisoniades Ophion.

Papilio Ophion, *Dru., Ill. Nat. Hist.*, III, pl. 17, f. 1, 2.

„ „ *Stoll, Suppl. Cram.*, pl. 26, f. 4.

Thymele Ophion, *Boisd., Faune Ent. de Mad.*, pl. 9, f. 4.

Pterygospidea Ophion, *Wallgr., Lep. Rhop. Caffr.*, p. 53.

Exp. 1 in. 6½ lin.

♂. *Dusky-brown, with vitreous spots. Fore-wing*: about middle, just at extremity of cell, an oblique row of five small, vitreous, blackish-edged spots between costal nervure and second median nervule,—of these spots the fourth is furthest from base; on costa, between this band and apex, two vitreous dots; before middle, between median and submedian nervures, two blackish spots form a short transverse streak; between extremity of row of spots and inner-margin, an ill-defined transverse streak of bluish-white scales. *Hind-wing*: often spotless, often with an ill-defined irrorated-bluish-white band along hind-margin. **UNDER-SIDE.**—*Fore-wing*: similar, but blackish edging to vitreous spots wholly wanting. *Hind-wing*: *bluish-white*; costa bordered with blackish, marked with a distinct black spot; hind-margin brownish, often preceded by a sinuate streak of the same colour, either distinct or confounded with the marginal brown; in some specimens a row of indistinct dark spots beyond middle.

♀. *Lighter, with a reddish tinge. Fore-wing*: vitreous spots larger, especially the fifth which is large and quadrate, and is succeeded by two additional small vitreous spots above submedian nervure; three vitreous dots in costal row towards apex; no bluish-white transverse streak. *Hind-wing*: two much-curved transverse rows of blackish spots, one (before middle) of three, the other (beyond middle) of seven spots; hind-marginal bluish-white narrower and fainter. **UNDER-SIDE.**—*Fore-wing*: two spots below median nervure before middle *whitish*. *Hind-wing*: costa broadly brown-bordered, especially at apex; spots of transverse rows towards inner-margin indistinct or quite obsolete in the white.

The above characters of the ♂ are obtained from Boisduval's description and figure. This author gives no particulars leading one to think that he had then seen a ♀. My description of the latter sex is made from a single Natal specimen. The rows of blue dashes given in Stoll's figure of this species look anything but natural, and are probably intended to represent the bluish-white irroration of hind-wing. If Drury's figures be not larger than nature, the species must attain a considerably greater size in Western than in Southern Africa.

I believe that I twice saw this species at Knysna, as I distinctly noticed the white clouding of hind-wing when the butterfly settled.

Natal (W. Guenzins).—Coll. Tri. \

“Natal. Madagascar (common).”—Boisd.

208. *Nisoniades Sabadius.

Thymele Sabadius, *Boisd.*, *Faune Ent. de Mad.*, pl. 9, f. 2.
 Pterygospidea Nottoana, *Wallgr.*, *Lep. Rhop. Caffr.*, p. 54.

Exp. 1 in. 2 lin.—1 in. 6 lin.

Very closely allied to *N. Ophion*, Drury.

♂. *Dark-brown, more or less tinged with reddish. Fore-wing: no central row of vitreous spots, but only an indistinct macular blackish band; costal vitreous dots, and short blackish streak before middle, as in Ophion. Hind-wing: darker than fore-wing; two transverse rows of blackish spots very indistinct; no whitish hind-marginal clouding. UNDER-SIDE.—Glossy, tinged with fulvous, paler than on upper-side. Hind-wing: no trace of white; spots all but wanting; a yellowish tint towards inner-margin.*

♀. *Much paler, with a sub-violaceous gloss; markings identical with those of Ophion. Hind-wing: no whitish hind-marginal clouding. UNDER-SIDE.—Paler. Hind-wing: markings usually faint; a whitish line edges hind-margin; inner-marginal region very pale, in one specimen nearly whitish.*

I very much doubt whether this is not in reality a variety of *Ophion*, Drury, though the absence of the central vitreous spots in fore-wing of ♂, and of white in hind-wing of both sexes, together with its smaller size, give it a very distinct superficial aspect. There is certainly an inclination towards a white under-surface of hind-wing in some ♀ specimens, and the colouring of palpi, legs, and body is the same in both insects. However this may be, *Sabadius* seems a constant race, especially as regards the ♂.

Not common: in woods and copses.

October (b)—November (m)—February (m)—April (m).

An active, alert butterfly, fond of keeping about one spot or clump of bushes, settling frequently, usually on leaves. When settled, the wings are kept fully expanded; but I cannot say that they are never closed, for I did not on any occasion see the insect thoroughly at rest,—it was always on the *qui vive* to be off.

Knysna. Plettenberg Bay.—Coll. Tri.

“Mauritius and Bourbon.”—Boisd.

209. Nisoniades Prodicus.

Papilio Prodicus, *Stoll*, *Suppl. Cram.*, pl. 33, f. 6.

Hesperia „ *Doubl.*, *Westw.*, *Hewits.*, *Gen. D. Lep.*

Exp. 1 in. 2 lin. (fig.)

Nearly allied to *N. Ophion*, Drury.

Reddish-brown, with a violet lustre, and with quadrate vitreous spots. Fore-wing: central row of vitreous spots as in Ophion, but the first spot wanting; instead of a blackish transverse streak, between median and submedian nervures before middle, is a conspicuous quadrate vitreous spot; three vitreous dots in costal are towards apex. Hind-wing: spotless. Cilia greyish. UNDER-SIDE.—Brown. Fore-wing: as above. Hind-wing: two interrupted, transverse, shining-white stripes. Body violet: eyes brown: antennæ ringed black and white and with a black club.

These characters are derived from Stoll's figure and description. The want of spots on hind-wing, with the two white stripes, of its under-side, as well as the vitreous spot before middle of fore-wing, seem the chief distinguishing marks from *Ophion*.

"Cape of Good Hope."—Stoll.

210. *Nisoniades Mokeezi*.

Pterygospidea Mokeezi, Wallgr., Lep. Rhop. Caffr., p.
[54.]

Hesperia Amaponda, Trimen, Tr. Ent. Soc., 3rd Series, I,
[p. 405.]

Exp. 1 in. 7 lin.—1 in. 9 lin.

♂. *Dark-brown; with sub-vitreous, yellow-ochreous, transverse markings. Fore-wing: in basal portion, and along inner-margin, irrorated with dull-yellowish; a rather wide stripe, irregularly dentate externally and internally, from costa slightly before middle to submedian nervure near anal angle, where it ends almost in a point; near apex, a parallel shorter band, touching neither costa nor hind-margin. Hind-wing: irrorated with yellowish scales, excepting along costa and hind-margin; at extremity of discoidal cell a sub-reniform spot. Cilia of fore-wing brown, of hind-wing yellow. UNDER-SIDE.—Paler; yellow markings as above, but with fewer scales than on upper-side; a very limited yellowish irroration at bases. Fore-wing: a pale yellowish-grey space at anal angle, adjoining extremity of transverse band. Hind-wing: spot at extremity of cell larger, more conspicuous; in cell, a more or less distinct, small, yellow spot.*

♀. Similar, universally paler.

"Forest on Hangman's Bush Hill, above Frankfort, March 28th, 1861; abundant."—D'Urban, in litt.

Mr. J. H. Bowker describes this species as "solitary and rare; flies swiftly, often lighting with the wings open on the under-side of weeds and plants near the water."

Mr. D'Urban informs me that the ♂ *Mokeezi* is in the Collection of the British Museum.

Bashee River, Kaffraria (J. H. Bowker).—Coll. Tri. et Coll. S. A. Mus.

Zoolu, S. Africa.—Coll. Brit. Mus.

Genus ISMENE.

Ismene, *Swains.*

Thymele, *Boisd.*

IMAGO.—*Head* as wide as thorax; *palpi* very thick, the second joint much swollen and densely clothed with scales and hairs, terminal joint linear, naked, rather long; *antennæ* gradually incrassate, the tips acuminate, and very much re-curved. *Fore-wings* much elongated: costa slightly curved near base; inner-margin short: *discoidal cell* narrow, very long, *closed*. *Hind-wings* broadly and prominently lobed at anal angle; costa much arched; cell open. *Legs* rather long: femora and middle and hind tibiæ with long hairs. *Abdomen* short.

The insects of this Genus are the largest of the South African *Hesperidæ*. Their strong, bulky bodies, and dull colours give them much general resemblance to Moths: the large head, with its thick palpi and hooked antennæ, being not unlike that of some *Sphingina*.

211. *Ismene Ratek*.

Thymele Ratek, *Boisd.*, *Faune Ent. de Mad.*, pl. 61.

Exp. 2 in. 1 lin.

Dull-brown. *Fore-wing*: base and part of inner-margin tinged with yellow-ochreous. *Hind-wing*: base and inner-marginal region clothed with short orange-ochreous hairs. *Cilia* brown, but orange on lobe of anal angle of hind-wing. UNDER-SIDE.—*Glossy olive-brwn or bronze-colour, spotless*. *Cilia* as above.

This species seems to be much rarer in collections than *I. Florestan*. Its haunts and habits are unknown to me.

Natal.—Coll. Tri.

“Madagascar.”—Boisd.

212. *Ismene Keithloa*.

♀. *Rhopalocampta Keithloa*, *Wallgr.*, *Lep. Rhop. Caffr.*,
[p. 48, n. 3.]

Ismene Stella, *Trimen*, *Tr. Ent. Soc., Lond.*, 3rd Ser., I, p.
[287.]

Exp. 1 in. 10 lin.—2 in. 1 lin.

♂. *Dull ochreous-brown.* *Fore-wing*: an orange mark on costa at base. *Hind-wing*: much darker than fore-wing, especially at anal angle, and clothed with orange hairs except near costa and hind-margin; cilia orange from anal angle for more than half the extent of hind-margin, fading thence into greyish. *UNDER-SIDE*.—Tinged with bronzed-green. *Fore-wing*: on inner-margin, about middle, a dull-whitish space. *Hind-wing*: before anal angle, between third median nervule and submedian nervure, an orange-red marking, divided by a transverse black streak; below this mark, an orange spot on inner margin; orange fringe as above.

♀. Rather paler; the orange colouring much paler. *UNDER-SIDE*.—*Fore-wing*: no whitish space.

This species is very like *I. Ratek*, but the bright-orange spots of hind-wing readily distinguish it.

Port Natal.—Coll. Brit. Mus. et Coll. Tri. (Guenzius).

213. *Ismene Florestan*.

Papilio Florestan, *Cram.*, *Pap. Exot.*, pl. 391, f. E, F.

Le Papillon Florestan, *Godt.*, *Enc. Meth.*—Ins. pl. 46,
[f. 6.]

Thymele Florestan, *Boisd.*, *Faune Ent. de Mad.*, p. 61.

Rhopalocampta Florestan, *Wallgr.*, *Lep. Rhop. Caffr.*, p.
[47.]

? Var. *Rhopaloc. Valmaran*, *Wallgr.*, *op cit.*, p. 48.

Exp. 2 in.—2 in.

♂. *Dull-grey brown.* *Fore-wing*: paler about middle; some greyish-yellow hairs at base and on inner-margin. *Hind-wing*: much darker near anal angle; central and inner-marginal region thickly clothed with yellow ochreous hairs, mixed with greyish near base. *UNDER-SIDE*.—Smoother, sometimes with a faint violaceous gloss. *Fore-wing*: a dull-whitish space on inner-margin, usually ill-defined on its edges. *Hind-wing*: darker than fore-wing, especially near anal angle; a broad, even, transverse, pure-white band from costa to submedian nervure, where it is abruptly interrupted, ending in a separate white spot close to inner-margin beyond middle. Cilia on both sides grey, but orange-yellow on lobe of anal angle.

♀. Rather darker, especially on *hind-wing*, the central colour of which is paler than in ♂. *UNDER-SIDE*.—As in ♂.

? Var. ♂ and ♀. (*Valmaran*, Wlgr.) Wholly as above described, except as regards *white band* of under-side of hind-wing, which is narrower on costa, and much wider on submedian nervure, and is *marked with three black spots*, viz.: two small, rounded ones on its outer edge, between first and third median nervules; and the third elongate, piercing it upwards from submedian nervure. Palpi, scaling on femora, and costal stripe of under-side of abdomen much paler yellow than in type of *Florestan*.

The differences presented by Wallengren's *Valmaran* do not seem to me sufficient to warrant its separation from *Florestan*, the two insects agreeing in every other particular but those just mentioned. The different shape of the white band is the strongest point in favour of the specific distinctness of *Valmaran*.

"Found in swampy spots and open forest."—J. H. Bowker, in litt.

Bashee River, Kaffraria (J. H. Bowker). Natal (Döhne). Damara Land (C. J. Andersson and J. A. Bell).—Coll. Tri. et Coll. S. A. Mus.

Port Natal. West Africa. Sierra Leone.—Coll. Brit. Mus.

ADDITIONAL SPECIES.

(ASCERTAINED TO BE SOUTH AFRICAN SINCE THE PUBLICATION OF PART I.)

FAMILY PAPILIONIDÆ.

Genus PAPILIO.

214. *Papilio Menestheus*.

- Papilio Menestheus*, *Dru., Ill. Nat. Hist.*, II, pl. 9, f. [1, 2.
 „ „ *Cram., Pap. Exot.*, pl. 142, f. A, B.
 „ „ *Fab., Ent. Syst.*, III, 1, p. 31.
 „ „ *Herbst, Nat. Bek. Ins—Schmett.*, [pl. 40, f. 1, 2.
 „ „ *Godt., Enc. Meth.*, IX, p. 59.
 „ „ *Boisd., Sp. Gen. Lep.*, I, p. 236.
 „ „ *Westw., Arc. Ent.*, I, p. 147.

Exp. 5 in.—5 in. $6\frac{1}{2}$ lin.

Tailed. Black, with pale sulphur-yellow bands and spots; the ground thinly irrorated with pale-yellowish scales: common to both wings—a transverse macular band, commencing broadly on costa of *fore-wing* near apex, narrowing and with its spots more separate as it approaches inner-margin beyond middle, and thence crossing *hind-wing* in a continuous stripe, straight on its inner, dentate on its outer edge, rather before middle, from costa to inner-margin,—a sub-marginal row of large sub-lunulate spots (eight in *fore-wing*, seven in *hind-wing*),—and a hind-marginal row of seven lunules (larger in *hind-wing*) marking excavations between nervules. *Fore-wing*: in cell, near extremity, an oblique elongate marking, formed of two confluent spots,—and also four thin longitudinal streaks of scales from base (the lower three branching from a common origin) nearly to extremity; *in ♂ on disc*, especially about median nervules and submedian nervure, a clothing of short, cotton-like hair. *Hind-wing*: two ocellate spots placed quite as in *Demoleus*

but more elongate,—that on costa *not* reddish itself, but the first lunule of sub-marginal row bounding it externally, like that on inner-margin, dull-red; between the two spots, more or less marked indications of similar spots, of which, however, only one (that next to inner-marginal spot) is distinctly blue-scaled: *tail* long, spatulate, marked on each side near its extremity with an elongate pale-yellow inwardly-convex spot. **UNDER-SIDE.**—Similar, paler, all the markings much suffused: all nervures more or less completely edged with pale-yellowish on both sides, *especially lower edge of costal nervure of hind-wing*; in *both wings*, a longitudinal streak between median and submedian nervures. *Fore-wing*: streaks in cell better defined. *Hind-wing*: three streaks in cell, like those of fore-wing; traces of ocelliform spots between the two ocelli much better marked, all more or less blue-scaled.

This splendid species, the finest of the South African *Papiliones* and the largest butterfly hitherto found in the country, has been taken in some abundance by Mr. Bowker in Kaffraria Proper. It is allied to *P. Demolens*, but may at once be recognised by its large size and long spatulate tails. I have not seen any specimens from Natal, nor heard of its occurrence there, but there can be little doubt that it does inhabit that Colony. Mr. Bowker gives me the following notes on the habits of this *Papilio*: “Only found in deep wooded kloofs, near running water, but in such localities all over the Transkeian territory. They fly steadily backwards and forwards about a certain spot, always keeping at a distance of about five feet from the ground. They first make their appearance at the end of September or beginning of October.”

Bashee River, Kaffraria (J. H. Bowker).—Coll. Tri. et Coll. S. A. Mus.

Sierra Leone. Ashanti.—Coll. Brit. Mus.

“Coast of Guinea.”—Boisd., *op. cit.*

FAMILY PIERIDÆ.

Genus PIERIS.

215. *Pieris Poppea*.

Papilio Poppea, Cram., *Pap. Exot.*, pl. 110, f. D.

„ „ *Herbst, Nat. Bek. Ins.*—Schmett., pl. 89,
[f. 5.]

„ „ *Fab., Ent. Syst.*, III. 1, p. 18.

Pieris „ *Godt., Enc. Meth.*, IX, p. 138.

„ „ *Boisd., Sp. Gen. Lep.*, I, p. 511.

Exp. 2 in.—2 in. 6 lin.

Allied to *P. Agathina*, Cram.

♂. *White, with black hind-marginal spots. Fore-wing*: base slightly blackish and *widely flushed with orange*; marginal spots as in *Agathina*, as well as apical blackish; costal edging much narrower especially beyond middle. *Hind-wing*: base slightly blackish, and faintly tinged with orange; marginal spots small, especially two next costa. UNDER-SIDE.—*Fore-wing*: no basal blackish, orange suffusion deeper, broader; spots more conspicuous, those at apex *not* enlarged and confluent, but similar to the rest. *Hind-wing*: *white*; spots larger and more distinct than above; costa near base bordered with orange.

♀. *More or less suffused universally with pale creamy-ochreous, into which basal orange gradually fades*, the nervules beyond middle conspicuous as white rays. *Fore-wing*: marginal spots larger, more elongate, especially those forming apical marking. *Hind-wing*: spots larger. UNDER-SIDE.—Similar to that of ♂, but the ground often more or less yellowish; spots very black and conspicuous, but not large.

The typical West African *Poppea* seems to have the marginal spots *very* large and elongate, radiating on the nervules. Mr. D'Urban first made me aware of this species being a South African native, he having captured two specimens in British Kaffraria. Mr. Bowker has since taken several examples in the Transkeian territory. The delicate structure of the wings, and the orange basal suffusion on *upper-side* readily distinguish this species from *Agathina*.

"23rd May, 1861."—D'Urb. in litt.

King William's Town.—Coll. W. D'Urban.

Bashee River, Kaffraria (J. H. Bowker).—Coll. S. A. Mus.

Genus ANTHOCHARIS.

216. Anthocharis Evenina.

Anthopsyche Evenina, Wallgr., Lep. Rhop. Caffr., p. 12.

Exp. 1 in. 6 lin.—1 in. 7 lin.

Allied to *A. Achine* and *A. Omphale*.

♀. *White, with pale-orange apical patch. Fore-wing*: costa blackish-edged; *inner-marginal black very broad, completely filling discoidal cell*, its outer edge sharply defined (being concavely excised at end of cell, abruptly truncate on median nervules a little beyond middle, and from third median extending, slightly hollowed, to inner-margin considerably before middle); below third median, almost touching extremity of black space, a good-sized ill-defined spot; apical patch traversed by a sub-macular black stripe

extending to second median nervule; the orange before stripe rather faint, beyond it well-defined and composed of five or six rays (much as in *Achine*, but more acuminate outwardly) which are *prolonged by faint orange lines to hind-margin*; no disco-cellular spot. *Hind-wing*: more or less widely suffused with dark-grey from base; a large, quadrate black spot on costa, contiguous to that on fore-wing; hind-marginal border broadly blackish. **UNDER-SIDE.**—Tinged with yellowish, and faintly grey-irrorated. *Fore-wing*: black space paler and duller, less sharply defined; faint apical patch as in *Achine* and *Omphale*, but macular stripe more apparent. *Hind-wing*: costal edging at base bright-orange; disco-cellular spot (without black dot) and indistinct angulated fascia dull-orange.

This is a very distinct species, readily recognised by the *width and singular form of the black clouding* of fore-wing. Nine ♀ specimens were taken by Mr. J. A. Bell in Damaraland, but I have seen no ♂ that can with certainty be referred to this species.

“*Kafraria* (Wahlberg).”—Wallengren.

Damaraland (J. A. Bell).—Coll. Tri.

217. *Anthocharis* Procne.

Anthopsyche Procne, *Wallgr.*, *Lep. Rhop. Caffr.*, p. 12.

Exp. 1 in. 4 lin.—1 in. 6 lin.

Allied to *A. Omphale*.

♀. *Fore-wing*: apical patch less red than in *Omphale*, considerably wider, not, or very faintly, marked with crossing nervules, and consisting of seven rays; inner black edging of patch well-marked, but abruptly ending about first median nervule, leaving a considerable space of orange touching the white ground-colour; outer edging ending on third median; a dot at anal angle, but none at end of cell; *inner-marginal blackish faint, narrow*, its base and extremity only darker. *Hind-wing*: costal border much as inner-marginal blackish of fore-wing, in one specimen almost obsolete; spots and portion of angulated streak much as in *Omphale* ♂. **UNDER-SIDE.**—As in *Omphale*, but paler and more thickly hatched with brownish-grey.

The colour, width, &c., of the apical patch, its contiguity with the ground colour, and especially the narrowness and faintness of the blackish longitudinal bands, readily distinguish this species from *A. Omphale*. The two specimens from which the above description is made were taken by Mr. Bowker, and seem thoroughly to agree with Wallengren's diagnosis;

but it is necessary to state that other specimens from the same region appear to link *Procne* with *Achine*. There seems no limit to the variations presented by the closely-allied species of this numerous Genus in South Africa, and it is impossible at present to dogmatise as to the worth of many of the species and varieties laid down by authors.

Bashee River, Kaffraria (J. H. Bowker).—Coll. Tri. et Coll. S. A. Mus.

“Kaffraria (Wahlberg).”—Wallengren.

218. *Anthocharis Gavis*.

Anthopsyche Gavis, Wallgr., *Lep. Rhop. Caffr.*, p. 13.
Exp. 2 in.

♂. *White, with red-fulvous apical patch. Fore-wing*: longitudinal inner-marginal stripe as in *A. Procne*, narrow, only covering base, and thence leaving a white space between it and cell, slightly curving upward at extremity; a disco-cellular dot; costa and whole of hind-margin edged with black, the latter scarcely more widely than costa; apical patch of six elongate, unequal spots, the three uppermost acuminate, the others rounded, outwardly;—a rather thin black streak separates patch from ground-colour, joining hind-margin on second median nervule. *Hind-wing*: costal stripe corresponding to inner-marginal one of fore-wing; at ends of nervules a row of triangular, outwardly-confluent spots. UNDER-SIDE.—*White. Fore-wing*: apex yellowish, with a fulvous spot; a disco-cellular dot; extremity of inner-marginal stripe apparent as a greyish-fuscous spot. *Hind-wing*: costa at base edged with fulvous-yellow, as well as black disco-cellular dot. Ends of nervules black in both wings, almost black-spotted in *fore-wing*.

These characters are taken from Wallengren, who notes the insect as being of the same size and shape as his *Thestias Annæ*. This seems an oversight as far as size is concerned, as he states *T. Annæ* to expand seventy millimètres, while the expanse of *A. Gavis* is given as fifty-three millimètres.

Two specimens of ♂ *Anthocharis* from Damaraland appear to me very near to *Gavis*, if not identical with it; but in both the costal stripe of hind-wing, and the under-side spot of fore-wing, are absent, while the inner edge of apical patch is scarcely visible; and in one the inner-marginal stripe of fore-wing is wanting. The size of the specimens, colour and shape of apical patch, discal dot, white under-surface, &c., quite accord with Wallengren's description.

“Kaffraria (Wahlberg).”—Wallgr.

? Damara Land (J. A. Bell and H. Hutchinson).—Coll. Tri. et Coll. S. A. Mus.

219. *Anthocharis Agoye*.

Anthopsycha Agoye, Wallgr., *Lep. Rhop. Caffr.*, p. 15.

Anthocharis Eosphorus, Trimen, *Tr. Ent. Soc.*, 3rd Ser.,
[I, p.

Exp. 1 in. 6 lin.—1 in. $9\frac{1}{2}$ lin.

♂. *White, irregularly sprinkled with blackish scales: with warm yellow-ochreous apical patch. Fore-wing: nervures black from before middle; no disco-cellular spot; apical patch small, exteriorly narrowly and faintly suffused with brownish, interiorly bordered by an ill-defined blackish stripe, nearly obsolete a little below its middle, reaching to second median nervule, on hind-margin. Hind-wing: costal and median nervules apparently black. UNDER-SIDE.—White, spotless. Fore-wing: a very faint indication of apical patch. Hind-wing: costa edged with orange-yellow near base.*

♀. *Similar; but apical patch more fulvous, though duller, externally more broadly and distinctly brownish-bordered, internally with a wider but shorter stripe, brownish, and becoming obsolete on second discoidal nervule. Fore-wing: a faint, minute dot at end of cell. UNDER-SIDE.—A faint, minute disco-cellular dot in each wing.*

This singular little species has the fore-wings markedly elongate. Wallengren observes that it approaches *A. subfasciata* more nearly than any other congener, but from that species it is abundantly distinct, seeming much closer to *A. Eris*, Klug.

The ♀ is described from a single, much-damaged, specimen. Seventeen examples were brought from the Interior by Mr. Bell.

“Kaffraria (Wahlberg).”—Wallgr.

Damaraland (J. A. Bell).—Coll. Tri.

I do not give *Anthocharis Phlegetonia*, Roger, included in Wallengren's list, because the latter author expresses some doubt as to the specimen he notes being really referable to that species.

Genus THESTIAS.

Thestias, Boisd.

Pieris, Godt.

IMAGO.—Very closely allied to *Anthocharis*. *Eyes* larger; *palpi* shorter, less hairy, last joint short, less acuminate; *antennæ* straighter, more gradually clavate. *Fore-wings* with sub-median nervure more strongly curved before middle. *Hind-wings* more or less produced at end of third median nervule.

This Asiatic Genus seems strictly intermediate between *Anthocaris* and *Eronia*; it follows *Idmais* (*vide* p. 62) in the classification I have adopted. The few species known are from India and the Eastern Archipelago. I include the Genus as South African on the authority of Wallengren, who records a new species, closely allied to the well-known *T. Marianne*, Cram., taken by Wahlberg.

220. *Thestias Annæ*.

Thestias Annæ, Walgr., *Lep. Rhop. Caffr.*, p. 16.

♂. Exp. 2 in. 9 lin.

Allied to *T. Marianne*, Cram.

White, very widely glaucous at bases; a reddish-fulvous, black-bordered patch in fore-wing at apex. Fore-wing: glaucous at base so wide that the white ground only appears as a fascia; costa and hind-margin very narrowly black-edged; fulvous patch triangular, occupying whole of apical region, separated from white by a broad straight, black fascia, and divided by nervules into eight elongate, outwardly slightly-rounded spots; black fascia extending from costa to hind-margin above sub-median nervure, and thence to inner-margin, so that anal angle is broadly black. *Hind-wing:* a broad black hind-marginal border, inwardly dentate on nervules. *UNDER-SIDE.*—*White:* a rounded disco-cellular blackish-fulvous spot in fore-wing, a lunate fulvous-centred one in hind-wing; a common transverse, discal row of fuscous or fuscous-ferruginous spots (not ocellate), in fore-wing angulated on second discoidal nervule and traversing apical fulvous (which is less than above and ill-defined); extremities of nervules black. *Fore-wing:* apex widely white, very faintly tinged with yellowish; basal glaucous outwardly edged by an angulated fuscous fascia; ends of three nervules next anal angle marked with rather large black spots. *Hind-wing:* basal glaucous fades gradually into ground-colour; costa at base yellow.

Translated from the description of Wallengren, who distinguishes the species from *Marianne*, Cram., by the straight inner-border of the apical patch, the narrowness of the costal and hind-marginal border, and the pale hue and markings of the under-side.

“*Kaffraria* (Wahlberg).”—Wallengren.

Genus ERONIA.

221. *Eronia varia*.

Eronia varia, *mihi*. N. Sp.

Exp. 2 in. 10 lin.—3 in. 1 lin.

♂. *White and yellow, with blackish hind-marginal spots. Fore-wing*: costa thinly edged with blackish and widely irrorated with grey near base; discoidal cell nearly filled with an *orange-red suffusion*, which extends faintly below it; margins faintly yellow-tinged; hind-marginal spots triangular, nervular, contiguous, at apex confluent; just before apex from costa, some indistinct oblique fuscous scaling. *Hind-wing*: *creamy-yellow*; marginal spots dark but ill-defined, rather suffused, that at end of discoidal nervule much the smallest; nervures white. UNDER-SIDE.—*Hind-wing and edges of fore-wing* (except inner-margin) *rich chrome-yellow*; some of marginal spots wanting, those present small, ferruginous-grey. *Fore-wing*: basal red deeper, its edge better defined; at apex a large, ill-defined, *whitish, partly ferruginous-grey-edged blotch*. *Hind-wing*: two similar blotches on hind-margin, one (bifid internally) between first sub-costal and discoidal nervules, the other between first and second median nervules; a little grey scaling extends on either side of the latter blotch.

♀. *Smaller than ♂. Fore-wing*: marking very faint; basal red almost obsolete. *Hind-wing*: *creamy orange-yellow*; spot obsolete or very small. UNDER-SIDE.—Similar to ♂, but *yellow deeper*, as on upper-side, and blotches indistinctly marked. *Fore-wing*: cellular suffusion *orange-yellow*, but little darker than hind-wing.

Each sex described from a single specimen, the ♀ being much worn. The latter was taken by Mr. Bowker near his camp on the Bashee, in the month of February.

Bashee River, Kaffraria (J. H. Bowker).—Coll. S. A. Mus.

FAMILY NYMPHALIDÆ.

Genus JUNONIA.

222. *Junonia Orithya*.

Papilio Orithya, *Linn., Syst. Nat.*, II, p. 770.

“ “ *Cram., Pap. Exot.*, pl. 19, f. C, D; pl.
[32, f. E, F; pl. 281, f. E, F; pl. 290,
[f. A—D.

“ “ *Fab. Ent. Syst.*, III, 1, p. 91.

Junonia Orithya, *Hübner, Verz. Bek. Schmett.*, p. 34.

Vanessa Orithya, *Godt., Enc. Meth.*, IX, p. 317.

Junonia Orithya, *Horsf. & Moore, Cat. Lep. E. I. C.*
[*Mus.*, p. 141.

Exp. 1 in. $10\frac{1}{2}$ lin.—2 in. 3 lin.

Nearly allied to *J. Clelia*, Cram.

♂. *Fore-wing*: markings similar to those of *Clelia*; cellular blue striæ more distinct; apical bands not so white, tinged with ochreous; ocellate spots ringed with paler red; *immediately below the lower ocellus a quadrate blue space*; costa edged with ochrey-whitish. *Hind-wing*: *all metallic blue*,—which colour often more or less suffuses the ochrey-whitish hind-marginal lunulate streaks; basal region, especially towards inner-margin, widely black; ocellate spots usually larger and brighter than in *Clelia*, sometimes very much larger. UNDER-SIDE.—Similar to that of *Clelia*, but usually paler, and less distinctly marked. *Fore-wing*: *no blackish on inner-marginal region, which is brownish-grey*; orange in cell paler, more yellow,—the striæ crossing it *not bluish*, but very pale greyish; lower ocellus larger and more distinct. *Hind-wing*: streaks as in *Clelia*, but the two beyond middle more dentate; the space inclosed by the latter not much darker than rest of wing; two ocelli usually rather well-marked, but often, like rest of row, only represented by fuscous dots.

♀. *Paler, browner*; *ocellate spots much larger*, especially in hind-wing; *blue much duller*, often with a greenish tinge, only filling a limited space beyond middle, or sometimes wholly wanting. UNDER-SIDE.—As in ♂, but sometimes more distinctly marked, and the *hind-wing* more variegated.

Cramer's figures on pl. 281 represent a *Variety* of the ♀, in which there is a *fulvous band* between the two ocelli of *fore-wing*, and in which the *under-surface* is very strongly marked, especially the band and row of ocelli beyond middle of *hind-wing*.

LARVA.—*Black*; legs ochre-yellow. A white lateral stripe running immediately above legs. Armed with black branched spines, of which there are two short ones on head: tubercles, from which, on each side, two rows of spines spring, ochre-yellow. "On a species of *Vitex*, bearing the native name of "Saban."—December."—Horsf., M.S. PUPA.—*Sandy-ochreous*, clouded with blackish on wing-covers and abdomen: back tuberculated. Rather stout: head not sharply pointed.

Described from figures on Pl. V of Horsfield & Moore's "Catalogue."

Wallengren reports this beautiful *Junonia* as one of Wahlberg's Kaffrarian captures. I am strongly inclined to think that *J. Clelia* is an African sub-species of *Orithyia*.

Kaffraria (Wahlberg)."—Wallengren.

Damaraland (J. A. Bell).—Coll. Tri.

East Africa (E. L. Layard). China.—Coll. S. A. Mus.

Java. Sumatra. Pinang. North India. Bootan.
Canara.—Coll. E. I. C. Mus.

"Querimba. Arabia. China."—Hopffer, in Peters' Reise.



ADDITIONS AND CORRECTIONS.

For the sake of brevity, the initials only of the following correspondents succeed the several localities in which they have taken a species, or the notes they give concerning its habits, &c.: Charles J. Andersson, Henry J. Atherstone, John A. Bell, James H. Bowker, William S. M. D'Urban, G. Hettarsch, R. C. Jones, Ven. Henry Kitton, L. Taats.

The "Addenda" given at the end of Part I are here re-printed.

Papilio Merope.—P. 11.—*Hab.* Kleinemond River, Bathurst (H. J. A.); Bashee River, Kaffraria (J. H. B.).

P. Nireus.—P. 15.—*Hab.* Bashee River (J. H. B.); Windvogelberg (Captain Bulger). "May and August" (J. H. B.).

P. Demoleus.—P. 17.—*Hab.* Stellenbosch; Paarl; Bain's Kloof; Bashee River (J. H. B.); Damara Land (J. A. B.).

P. Cenea.—P. 20.—*Hab.* Kleinemond River (H. J. A.); King William's Town (W. D.); Bashee River and Manubie Forest (J. H. B.).

Females of this species occur, which do not differ from the ♂, excepting that the colours are duller and paler. Mr. Bowker has forwarded me the fore-wing of a singular Variety of the ♀, in which the area occupied by brick red in the *Chrysippus* like form is *pure-white*, and the apical spot is wanting.

"April" (W. D. and H. J. A.).

P. Leonidas.—P. 21.—*Syn.* *Papilio Anthemenes*, *Wlgr.*, *Lep. Rhop. Caffr.*, p. 6. *Hab.* King William's Town and East London (W. D.); Bashee River (J. H. B.).

P. Messalina.—P. 23.—*Hab.* Perie Bush, near King William's Town (H. K.).

I am glad to be able to publish this species as a veritable South-African. Archdeacon Kitten forwarded me a specimen taken (April, 1863) in a mountain-forest at a considerable elevation.

Pontia Alcesta.—P. 26.—*Hab.* "Querimba."—Hopffer.

Pieris Agathina.—P. 28.—*Syn.* ? *Pieris Thyssa*, *Hpfr.*, *Peters' Reise* &c., pl. 21, f. 7—10. *Hab.* Graham's Town (H. J. A.); Butterworth and Bashee River (J. H. B.); Damara Land (J. A. B.); "Querimba"—Hopffer.

My "Variety A," of *Agathina* is evidently identical with Hopffer's *Thyssa*, ♂. The latter's figure of the ♀ presents the same spots as those of the ♂, and the hind-wing is deep ochrey-yellow above, as in "Variety C" of *Agathina*. Though *Thyssa* would thus appear a distinct race, I do not consider it entitled to the rank of a species.

Pi. Pygea.—P. 29.—*Hab.* Bashee River (J. H. B.).

Pi. Charina.—P. 30.—*Syn.* *Pieris Simana*, *Hpfrr.*, *Peters' Reise &c.*, pl. 23, f. 3—6. *Pinacopteryx alba*, *Walgr.*, *Lep. Rhop. Caffr.*, p. 10. *Hab.* Kleinemond River (H. J. A.); Bashee River (J. H. B.); "Inhambane"—Hopffer.

Pi. Severina.—P. 32.—*Hab.* Graham's Town (H. J. A.); Perie Bush (H. K.); Windvogelberg (Captain Bulger); Butterworth and Bashee River (J. H. B.); "Querimba"—Hopffer. "April" (H. K.)

Pi. Gidica.—P. 34.—*Syn.* *Pinacopteryx* Westwoodi, *Walgr.*, *Lep. Rhop. Caffr.*, p. 9, ♂; *Pin. Doubledayi*, *Walgr.*, *op. cit.*, p. 8, ♀. *Hab.* Bashee River (J. H. B.); Damara Land (J. A. B.).

Pi. Mesentina.—P. 35.—*Hab.* King William's Town (Mrs. Tyrwhitt Drake); Murraysburg (J. J. Muskett); "Tette and Querimba"—Hopffer.

Pi. Zochalia.—P. 37.—*Hab.* King William's Town (W. D.); Bashee River (J. H. B.).

Pi. Hellica.—P. 39.—*Hab.* Stellenbosch; Paarl; Wellington; Vogel Vley; Worcester; Genadendal (G. H.).

Pi. Eriphia.—P. 40.—*Syn.* *Pieris Eriphia*, *Godt.*, *Enc. Meth.*, IX, p. 157. *Pieris Tritogenia*, *Auct.* (*Pontia Trit.*, *Klug—Ehcnb. Symb. Phys.*, pl. 8, f. 17, 18,—second. Boisd.). *Hab.* "West Coast of Africa, Senegal, Nubia, Dongola."—Boisd; Kleinemond River (H. J. A.); Bashee River (J. H. B.); "Tette and Querimba"—Hopffer. "April and August" (H. J. A.). "June" (J. H. B.).

Anthocharis Ione.—P. 43.—*Syn.* *Anthoch. Ione*, *Hpfrr.*, *Peters' Reise &c.*, V, pl. 21, f. 1—6; *Anthopsyche speciosa*, *Wlgr.*, *Lep. Rhop. Caffr.*, p. 16. *Hab.* "Arabia, Senegal, Tette, and Querimba"—Hopffer.

A. Danaë.—P. 44.—*Hab.* Bashee River (J. H. B.).

The specimens referred to as taken by Mr. D'Urban appear to be actually *A. Eupompe*.

A. Achine.—P. 46.—*Hab.* Graham's Town and Kleinemond River (H. J. A.); Bashee River (J. H. B.); "Tette"—Hopffer.

[Angola is given by Hopffer as a locality of *A. Auterippe*, which must be considered as a Variety of *Achine*]

A. Omphale.—P. 50.—*Hab.* Graham's Town and Kleinemond River (H. J. A.).

A. Delphine.—P. 53.—*Hab.* New Year's River, near Graham's Town (H. J. A.).

A. Evarne.—P. 55.—*Hab.* Keiskamma Hoek (H. J. A.); Bashee River (J. H. B.). "April" (H. J. A.).

A. Keiskamma.—P. 56.

Under the title of *A. Eucharis*, Fab., Wallengren records a specimen, taken by Wahiberg, which he observes may very probably be a variety of the ♀ of *A. Evarne*. The characters given coincide well with those of *A. Keiskamma* ♀. Specimens of *Evadne* recently received induce the belief that *Keiskamma* is a sub species of that butterfly.

A. subfasciata.—P. 58.—*Syn.* *Teracolus subfasciatus*, Sws. *Zool. Illustr.*, 2nd Ser., III, pl. 115. *Ptychopteryx Bohemani*, Walg., *Lep. Rhop. Caffr.*, p. 18.

This species was taken abundantly in Damara Land by Mr. John A. Bell during the year 1862. Swainson figures the ♂, not the ♀ as Boisduval states. I append descriptions of both sexes.

Exp. 2 in.—2 in. 3 lin.

♂. *Sulphur-yellow*, with ochrey-yellow apical patch. *Fore-wing*: a small, thin disco-cellular spot; costa narrowly black-edged from near base, paling and widening into a dull-fuscous apical border which, outwardly bordering ochre-tinged patch, extends along hind-margin nearly to end of third median nervule; apical patch small, of the ground-colour, but suffused with greyish-ochreous, crossed by three nervules,—inwardly bordered by a broad black bar from costa, ending abruptly on first median nervule, where a few dusky scales (in some specimens) form an indistinct line between it and fuscous border. *Hind-wing*: paler; a fuscous indistinct spot on costa beyond middle. *UNDER-SIDE*.—*Greenish-white*: hind-wing and apex of fore-wing hatched closely with lines of ochrey-grey. *Fore-wing*: cellular spot wanting; bar from costa faintly showing. *Hind-wing*: hatching denser along costa, forming a dusky border; cellular fold, from base to hind-margin, inferiorly marked by an ochrey-grey stripe.

♀. *Much paler*, or sometimes nearly white: apical patch brighter or duller orange. *Fore-wing*: cellular spot ill-defined; fuscous border broader, tinged with ferruginous; costal edging reddish-grey; bar from costa reduced to a narrow, fuscous, sub-macular stripe, within which the orange slightly extends. *Hind-wing*: as in ♂. *UNDER-SIDE*.—Similar: hatchings darker. *Fore-wing*: apical orange faintly indicated. *Hind-wing*: cellular fold-streak more strongly marked.

The specimens before me having been pressed in a book, I am not in a position to state whether this species should be considered as the type of a new Genus. In structure and in the thicker and more pointed wings it seems to approach *Eronia* more than any other of the Genus *Anthocharis*.

Hab. “Kaffraria (Wahlberg).”—Wallgr.

A. Eris.—P. 59.—*Hab.* Bashee River (J. H. B.); Damara Land (C. J. A. and J. A. B.); “Abyssinia, Tette, Querimba”—Hopffer.

The specimens brought from Damara Land by Mr. Andersson were smaller, lighter, and with a more vivid apical violet gloss than those found far to the South, but Mr. Bell's examples from the same region were rather larger and darker than the Colonial specimens.

Idmais Vesta.—P. 62.

Specimens of the same species as that described under this name have been brought from Damara Land by Mr. Bell.

Eronia Leda.—P. 63.—*Syn.*—*Dryas Wahlbergi*, Wlgr., *Lep. Rhop. Caffr.*, p. 17. *Hab.* Bashee River (J. H. B.).

Mr. Bowker writes as follows on this brilliant butterfly. "Near rivers, flying with great rapidity up and down the banks. Common near the Bashee in summer and autumn; also met with near the Colossa and Nabesa Rivers, but not so numerous. Very numerous all the summer and autumn, 1862." In my notes on this species I too hastily annidverted on Dr. Boisduval's view of its relations as the type of a distinct genus. Further examination has convinced me, that though a true *Eronia*, *Leda* presents several indications of alliance with the genus *Anthocharis*.

E. Cleodora.—P. 64.—*Hab.* Graham's Town and Kleinemonnd River (H. J. A.); Bashee River (J. H. B.); "Querimba"—Hopffer. The ♂ is commonly pure-white.

E. Buquetii.—P. 66.—*Syn.* *Eronia Buquetii* (Var. *Mosambicensis*), Hopffer, in *Peters' Reise*, pl. 23, f. 9. *Hab.* Cape Town (April, 1863); Breede River (L. T.); Bashee River (J. H. B.); Damara Land (C. J. A.); "Querimba"—Hopffer.

Mr. Andersson's specimen of this butterfly is identical in marking with those noted from Natal.

Callidryas Florella.—P. 68.—*Hab.* Bashee River (J. H. B.); Damara Land (J. A. B.); "Querimba and Tette"—Hopffer.

Mr. Bowker writes: "Numerous, March, 1863; made their appearance in one day by thousands; rare by the middle of April. Easily caught, settling upon flowers at edge of forest, but rarely met with *inside* woods. Seen on 20th July, 1863."

C. Rhadia.—P. 69.—*Hab.* Kleinemonnd River (H. J. A.); Bashee River (J. H. B.); Damara Land (C. J. A. and J. A. B.).

The ♂ does not differ from the ♀ except in the thinner disco-cellular spot of fore-wing and the smaller ferruginous marginal spots. On the 20th September, 1863, I saw a specimen of this insect fly from seaward along the Central Jetty, Cape Town. Mr. Bowker's note on *Rhadia* is worthy attention: "Appeared with *Florella* and disappeared at the same time." Mr. Atherstone took it in "April (e) and August."

Colias Electra.—P. 71.—*Hab.* Stellenbosch; Paarl; Wellington; Vogel Vley; Worcester; Kleinemonnd River (H. J. A.); Murraysburg (J. J. Muskett); Bashee River (J. H. B.); Damara Land (J. A. B.).

LARVA.—Attenuated posteriorly; slightly and thinly pubescent. Yellowish-green, closely irrorated with darker atoms. Along centre of back, from head to tail, a dark-green streak; on each side of back an ill-defined yellow streak, shading above into the pale-green. On each side, touching yellow streak, a broad dark-green band, edged inferiorly by a conspicuous pure-white or yellowish-white narrow stripe, above spiracles. Head granulated, clothed with very short pale hairs.

PUPA.—Attached invariably head upper-most. Pale-green, semi-transparent, darker anteriorly. Prominences of head and back of thorax rather obtuse: outline of wings projecting in a convex ridge below breast. A dark-green dorsal line. Median lateral line of frontal prominences marked

with a black streak inferiorly edged with greenish yellow; inner marginal edge of wing-cases also defined with blackish. On each side of abdomen a yellowish-white stripe; below this, touching hind-margin of wing-covers, a short abruptly-ending black streak.

The Larvæ were found in May, feeding on *Vicia sativa* (Lucerne). The Pupa-state continued from eighteen to twenty-three days, but this was in the beginning of winter. The Larva appears very different from that briefly described by Westwood as the caterpillar of *C. Edusa*, so that *Electra's* claim as a distinct species seems tolerably established.

Terias Rahel.—P. 76.—*Syn.* (second. Hopffer). "*Terias Drona*, *Horsf.*, *Boisd.* *Papilio Brigitta*, *Cram.* ? *Terias pulchella*, *Boisd.*" *Terias Zoë*, *Hpf.*, *Peter's Reise*, &c., *Ins.*, p. 369, pl. 23, f. 10, 11.

On the 24th April, 1863, Mr. Bowker forwarded me a number of specimens of *Terias*, among which were specially marked, as taken in copulâ, an ordinary ♂ *Rahel* and a ♀ *Brigitta*. This makes it probable that Hopffer is right in holding the two forms as one species. Wallengren gives *T. Drona* as South African, but his short description applies thoroughly to *Rahel*. Hopffer (see above) considers *Drona* a variety of *Rahel*, stating that it only differs in the more sharply-defined under-side markings. Hopffer's *T. Zoë* certainly is nothing more than the ♀ of *Rahel*, rather less densely irrorated than usual. He distinguishes the insect by its "more rounded" fore-wings, while Wallengren, strangely enough, states that he would have taken *Zoë* for a Var. of *Brigitta*, were it not for the "much more acute apex and anal angle" of fore-wings!

"September to April"—(W. D.). *Hab.* Bashee River. "Very common in summer and autumn all over the Transkei Territory in open grassy country"—(J. H. B.).

T. Desjardinsii.—P. 78.—*Syn.* *T. Desjard.*, *Boisd.*, *Sp. Gen.*, I, p. 671. *Hab.* Bashee River (J. H. B.).

Dr. Boisduval observes that this species is perhaps but a variety of *T. Floricola*, *Boisd.*, which itself, he thinks, may be only a variety of *T. Hecabe*, *Linn.* As regards *Floricola* being a variety of *Hecabe*, I am inclined to agree with him, but the shorter, acutely-apexed fore-wings and more or less sub-angulated hind-wings seem to separate *Desjardinsii* from both these species.

T. Brigitta.—P. 80.—*Hab.* Umquabaaba River, Natal (R. C. J.); Bashee River (J. H. B.).

Danais Echeria.—P. 86.—*Hab.* Bashee River (J. H. B.); Umquabaaba River, Natal (R. C. J.).

D. Chrysippus.—P. 88.—*Hab.* Genadendal (G. H.); Bashee River (J. H. B.). "*Querimba*"—Hpf.

Specimens of this abundant species not rarely occur, in which the disc of hind-wings is much suffused with white. Mr. Bowker writes that individuals so suffused were very common in Kaffraria in March, 1863.

Acraea Horta.—P. 92.—*Hab.* Genadendal (G. H.); Bashee River (J. H. B.); Damara Land (C. J. A. and J. A. B.).

Specimens from Damara Land are much smaller and paler than the type, and have a narrow, compact, hind-marginal border on hind-wing, enclosing much smaller spots. The under-side of hind-wing is also more generally suffused with pinkish-red. The under-side spots of hind-wing in the type vary very much in size and number.

A. Hypatia.—P. 97.—*Syn.* *Acræa Natalica*, *Hopfr., Peter's Reise*, &c., pl. 23, f. 12, 13. *Acræa Bellua*, *Wlgr., Lep. Rhop. Caffr.*, p. 22. *Hab.* Bashee River (J. H. B.). *Var.* *Natalica*, Boisd.

A. Zetes.—P. 99.—*Hab.* Bashee River (J. H. B.).

Mr. Bowker's collection only contained a single specimen of this fine *Acræa*, a ♀, of which I append a description. It was taken in January.

♀. *Larger than ♂, duller and paler*: markings blackish, suffused. *Fore-wing*: between costal band and apical black, a pinkish-white, outwardly-dentate bar. *Hind-wing*: central whitish suffusion much fainter; a row of dull-whitish dots in hind marginal border. *UNDER-SIDE*.—As in ♂.

As in many other *Acrææ*, the abdomen of the ♀ *Zetes* is black above with white spots as far as the extremity, while in the ♂ an ochreous suffusion covers nearly the terminal half.

A. Lycia.—P. 102.—*Hab.* Bashee River (J. H. B.); Damara Land (J. H. B.).

A. Rahira.—P. 103.—*Hab.* Graham's Town (H. J. A.); Bashee River (J. A. B.). "March."—H. J. A.

A. Cynthia.—P. 108.—*Syn.* *Acræa Cabira*, *Hopfr., Peter's Reise*, &c., pl. 23, f. 14, 15; *Wlgr., Lep. Rhop. Caffr.*, p. 21. *Hab.* "Inhambane."—Hopfr.

A. Aganice.—*Hab.* Igora Mouth (J. H. B.). Mr. Bowker found this butterfly on "*wacht-een-beetje*" bushes, in the month of February¹

A. Protea.—P. 110.—*Hab.* Bashee River (J. H. B.).

Mr. Bowker observes: "Found among reeds and in forest near water, in summer, autumn, and winter." Mr. D'Urban writes that Mr. Hewitson has figured and described this species as *A. Esebria* (*Exot. Butt.*, II, pl. 20, f. 11, 12). This, being the older name, must be adopted instead of mine.

A. Amazoula.—P. 111.—*Hab.* Bashee River (J. H. B.).

"Near one spot, on stony bank, where the grass is short and in tufts: buzzing round in considerable numbers, and lighting on ground or on small stones."—J. H. B.

Atella Phalanta.—P. 115.—*Hab.* Kleinmond River (H. J. A.); Bashee River (J. H. B.).

Mr. Bowker observes: "Settles near the top of flowering trees, but only for a few seconds, and then away before the net has a chance. The best way is to make a rapid sweep at the insect while in flight, as it frequently happens that on a person approaching the tree on which it sits, the butterfly flies direct towards him, often passing within a few inches of his head. Its colour is very brilliant: no mistaking it even at a distance and among other butterflies. Very local; always solitary. March to May, 1863."

Pyrameis Cardui.—P. 117.—*Hab.* Butterworth and Bashee River (J. H. B.); Stellenbosch; Paarl; Wellington; Vogel Vley; Bain's Kloof; Worcester; Saldanha Bay; Umquabaaba River, Natal (R. C. J.); Damara Land (J. A. B.).

Mr. Bowker gives me the following localities for this ubiquitous insect : "Met with in Lower and Upper Albany, Fish River Valley, Somerset East, Uitenhage, Graaff-Reinet, Colesberg, Cradock, Fort Beaufort, and in the Free State as far as Modder River and Bloemfontein." Mr. W. F. Kirby, in his paper "On the Geographical Distribution of European Rhopalocera" (Tr. Ent. Soc. Lond.) states, on the authority of Mr. Bates, that *Cardui* does not occur in Brazil, being there replaced by a variety of *P. Huntera*, Fab.

I append a description of a singular *Variety* of *Cardui*, taken by Mr. D'Urban at King William's Town

Fore-wing: suffused with blackish, to the confusion of the ordinary markings; large apical white spot obliterated; blackish border at anal angle broad and suffused. *Hind-wing*: blackish suffusion over the whole costal region as far as apex; row of black spots faint, whitish-centred; hind-marginal rhomboidal spots not contiguous. UNDER-SIDE.—Similarly suffused. *Fore-wing*: large apical spot wanting; anal angle varied with whitish. *Hind-wing*: blackish suffusion obliterating costal and discocellular white markings; nervures yellowish-white; first, third, and fourth ocelli whitish, indistinct, merged in a white and greyish band immediately succeeding them.

I imagine a singular-looking specimen that I saw near Cape Town (December, 1861) to have belonged to this *Variety*.

P. Hippomene.—P. 121.—*Hab.* Graham's Town (H. J. A.); Bashee River (J. H. B.).

Mr. Bowker writes: "Rare; tops of trees, and often upon weeds in old, deserted Kafir kraals.—May and June."

Mr. Atherstone took it in August.

Junonia Œnone.—P. 125.—*Hab.* Swellendam (L. T.); Port Elizabeth (W. D.); Butterworth and Bashee River (J. H. B.); Damara Land (C. J. A. and J. A. B.); "Somauli Land"—Felder; "East Coast of Africa, universally"—E. L. Layard.

Mr. Bowker states that the great enemy of this butterfly is a little striped lizard, which cautiously approaches and then seizes its prey;—"the lizards often hunt in pairs, driving the game from one to the other."

J. Clelia.—P. 128.—*Hab.* Kleinemonde River (H. J. A.); Bashee River to Coast East of Igora River (J. H. B.); Damara Land (J. A. B.).

"March and April"—W. D. Mr. Bowker meets with this insect "in spring, summer, and autumn; not seen in winter months. Open country: on flowers of low plants and of mimosa. Lights often on stones, mole-hills, and bare spots: easily taken."

J. Octavia.—P. 130.—*Syn.* ? Var. *Precis Simia*, *Wlgr.*, *Lep. Rhop. Caffr.*, p. 26. *Hab.* Bashee River (J. H. B.).

"November to March. Habits like those of *Clelia* and *Cloanthia*, found on tops of high ridges, both mimosa-clad and open."

J. Ceryne.—P. 131.—*Hab.* Bashee River. (J. H. B.)

"February. In grassy places."—J. H. B.

J. Amestris.—P. 132.—*Hab.* Bashee R. (J. H. B.)

A curious habit of this fine butterfly is noticed by Mr. Bowker. A number of specimens collect together at the end of autumn under rocks or in holes of dry banks, as many as 29 individuals having been taken at once by placing a net over the hole and disturbing them. This scarcely seems to be hibernation, as Mr. Bowker has not noticed the insect till the summer is well advanced. *Amestris* seldom frequents flowers, preferring rocky spots.

J. Archesia.—P. 133.—*Hab.* Knysna (Miss Wentworth); Graham's Town (H. J. A.); Kowie River (J. Fry); King William's Town (H. K.); Bashee River (J. H. B.)

"Habits like those of *Amestris*, but more solitary. Sometimes congregates under rocks; often met with in small rocky caverns in deep forest kloofs. Very rare in 1862; numerous in 1863, settling on flowers and occurring from January to August."—J. H. B.

J. Pelasgis.—P. 135.—*Syn.* Salamis Pelasgis, *Wlgr.*, *Lep. Rhop. Caffr.*, p. 25. *Hab.*—Bashee River (J. H. B.).

"Often settles on stones, broken ground near water; also found on high, grassy ridges. Spring, summer, and autumn, up to March numerous in 1863."

J. Pelarga.—P. 136.—*Syn.* ♂ Salamis Tukuoā, *Wlgr.*, *Lep. Rhop. Caffr.*, p. 25.

J. Cloantha.—P. 137.—*Hab.* Kowie Mouth, Bathurst (J. Fry); Bashee River (J. H. B.); D'Urban (M. J. McKen), and Umquabaaba River (R. C. J.), Natal.

"Occurs along sea-coast, from the Kei to the Bashee Mouth, where it was numerous in July, 1863. Rare 30 miles inland."—J. H. B.

J. Hecate.—P. 140.—*Hab.* Zambesi (Miss Gray).

I learn from Mr. Hewitson that this species was previously described by Dr. Felder under the name of *Precis Natalica*. In this case, it should stand in my arrangement as *Junonia Natalica*, Felder, sp.

I saw two specimens of this butterfly in the Botanic Garden at D'Urban, Port Natal, on the 23rd of June, 1865. Its flight is quite that of a *Vanessa*, hurried and rather irregular, interrupted by frequent settling on the ground.

J. Anacardii.—P. 141.—*Syn.* *Protogoniomorpha Anac.*, *Wlgr.*, *Lep. Rhop. Caffr.*, p. 24. *Hab.* Umquabaaba River (R. C. J.); Zambesi (H. Waller)

I saw a solitary specimen of this splendid insect in the Natal Botanic Garden, on 23rd June, 1865. It flew rather high, and perched with closely-shut wings on the leaves of a Mango tree. Mr. McKen, the Superintendent of the Garden, informed me that this butterfly is numerous there in the summer, frequenting the flowers of *Lantana*.

Myscelia Natalensis.—P. 144.—*Syn.* *Eunica Natalensis*, *Hpfr.*, *Peter's Reise, nach Mossamb.*, *Ins.*, p. 381. *Crenis Boisduvali*, *Wlgr.*, *Lep. Rhop. Caffr.*, p. 30. *Hab.* "Querimba."—Hopffer.

This species seems rightly referred by Hopffer to the Genus *Eunica* of *Hübner*, which chiefly consists of American insects. I met with *Natalensis* commonly at Port Natal in June and August. Its habits much resemble those of *Eurytela Hiervas*, its flight being confined to the immediate neighbourhood of trees, and interrupted by frequent settling upon the trunk or branches. Mr. McKen showed me a tree, close to his house in the Botanic Garden, the leaves of which were whitened with the empty pupa-skins of this butterfly; and he further stated that the perfect insects often appear in immense numbers during the summer. I found a pupa from which the imago was on the point of emerging: it was white, and in form sub-angulated.

Neptis Melicerta.—P. 146.—*Syn.*—*Nymphalis Melicerta*, *Godt.*, p. 260 (not *Melinoë*, *Godt.*, as erroneously stated) *Neptis Agatha*, *Hpfr.*, *Peters' Reise &c.*, *Ins.*, p. 383. *Hab.*—Botanic Garden, Port Natal (M. J. McKen); "Querimba."—Hpfr.

Athyma Saclava.—P. 148.—*Syn.* *Neptis Marpessa*, *Hpfr.*, *Peters' Reise &c.*, *Ins.*, pl. 24, f. 9—10. *Hab.*—"Tette."—Hpfr.

There can be no doubt that this butterfly should be included in the genus *Neptis*. I met with several examples, on June 23rd, 1865, in the Botanic Garden, Port Natal: they flitted slowly around some low shrubs.

Diadema Anthedon.—P. 152.—*Syn.*—*Papilio Dubia*, *Pal. de Beauv.*, *Ins. rec. en Afr. &c.*, pl. 6, f. 2 (secund. *Hpfr.*) *Diadema Dubia*, *Boisd.*, *Faune Ent. de Mad.*, &c., p. 40; *Hpfr.*, *Peters' Reise &c.*, p. 385. *Diadema Wahlbergi*, *Walg.*, *Lep. Rhop. Caffr.*, p. 27. *Hab.* "Oware and Benin, West Africa."—*Pal. de Beauv.* "Galam. Madagascar (Tintingue, Tamatave, Ste. Marie)."—*Boisd.* "Querimba."—Hpfr.

This fine species must stand as *Diadema Dubia*, *Pal. de Beauv. Sp.*, Doubleday's name of *Anthedon* being much more recent. Hopffer (loc. cit.) seems to think that the ♀ specimen from East Africa which he describes may belong to a distinct species, but the characters given quite accord with those presented by examples of *Dubia* taken at Natal.

As Boisduval remarks, this *Diadema* bears a striking resemblance to *Danaüs Niaria*, Linn., a well-known African butterfly.

D. Dabia is met with in the Botanic Garden at Port Natal, one being taken while I was there, on the 23rd June, 1865, but it seems to be far from common.

D. Bolina.—P. 153.—*Syn.* *Diadema* *Misippus*, *Hfr.*, *Peters' Reise*, &c., *Ins.*, p. 385. • *Hab.* Swellendam (T. Cairncross, Sr.); Bashee River (J. H. B.); Umquabaaba River, Natal (R. C. J.)

The very deceptive likeness of the ♀ *Bolina* to *Danaüs Chrysippus* is well known, the remarkable dissimilarity between the sexes rendering it the more noticeable; but it was only recently that, while discussing with Mr. Layard the mimetic analogies between *Danaüs* and *Diadema*, the model of the ♂ *Bolina* was discovered in *Danaüs Oehler*, a species inhabiting Eastern and South-Eastern Africa. The mimicry is far less perfect in the latter than in the former case, but is nevertheless very apparent.

Bolina is, in South Africa, a butterfly of irregular appearance. Mr. Bowker writes that he did not notice it in Kaffraria during the years 1860—61, and —62, but that in 1863, in the months of February and March, it came out "in hundreds." In April of the latter year several specimens were met with near Cape Town, as well as in other parts of the Western Province of Cape Colony. I took both ♂ and ♀ at D'Urban, Port Natal, on 23rd June, 1865.

Aterica Meleagris.—P. 157.—*Hab.* "Querimba."—*Hfr.*

Harna Alcimeda.—P. 159.—*Hab.* Perie Bush, Brit. Kaffraria (Ven. H. Kitton); Bashee River (J. H. B.)

Archdeacon Kitton's specimen was taken in April, 1853.

H. Eupithes.—P. 160.—*Hab.* Perie Bush, Brit. Kaffraria (H. K.)

This species was taken by Mr. Kitton with *H. Aleimeda*, at the same time and place. The Archdeacon describes it as "Fed of lightning on the ground, which was very muddy; plentiful, and easy to catch with a net." The specimen forwarded to me wants the disco-cellular markings.

Meneris Tulbaghia.—P. 162.—*Hab.* Highlands, Graham's Town (Mrs. Barber and H. J. A); Tsomo River, Kaffraria (J. H. B.)

I am indebted to Mrs. Barber for drawings of the Larva and Pupa of this interesting species, as well as for notes on their respective *habitats* and a specimen of the Pupa.

LARVA.—Pale bluish green; a conspicuous black, dorsal stripe from head to tail. Head chestnut-red; legs ochreous; spiracular rings black. Rather thick, attenuated to each extremity; thinly clothed with short

hairs. Two small pointed processes from extremity of anal segment. "Found on *Hebenstreitia* and on several species of *Compositæ*, in high sheltered situations among rocks, September and October. The young larva is of a much yellower green than in its full-grown state."—M. E. Barber.

PUPA.—"Semi-transparent, *French-white* in colour"—(M. E. B.) Abdomen with a dorsal row, and on each side three rows, of small black spots; rest of surface irrorated with black dots for the greater part; some larger black spots at dorsal and lateral angles, and about head, and a row of them across outer portion of wing-covers. Region of wing-covers extremely convex; a deep indentation on back between thorax and abdomen. All the angles much blunted and rounded. Anal prominence at point of suspension black and elongate. "Suspended to ferns or other plants growing under shelving rocks. Imago emerged from Pupa after two months."—M. E. B.

The apparent relationship to the Satyridæ displayed by the Imago of *Tulbaghia* is rather confirmed than otherwise by what is now known of the butterfly's earlier states, but many of the Nymphalideous characters of the perfect insect are strongly marked, and must have due weight in determining the position of the genus *Meneris*.

Nymphalis Xiphares.—P. 167.—*Hab.* Bashee River (J. H. B.)

Mr. Bowker's specimens belong to the type-form of the species. He notes the species as "rare."

N. Ethalion.—P. 170.—*Syn.* *Nymphalis Ephyra*, Godt., *Enc. Meth.*, IX, p. 355. *Hab.*—D'Urban, Port Natal (M. J. McKen).

Mr. Hewitson has pointed out to me that I wrongly referred to him as the author who gave the name *Ephira* to this butterfly, Godart (*loc. cit.*) having given it long before. The species must therefore be styled *Nymphalis Ephyra*, Godt.

N. Brutus.—P. 173.—*Hab.* Bashee River. (J. H. B.)

"Habits like those of *Xiphares*—rare. March, May, and June, 1863."—J. H. B.

N. Pelias.—P. 175.—*Hab.* Genadendal (G. H.); Montagu (L. T.).

There is no longer any doubt as to *Pelias* being a veritable South-African, as the above localities in the Colony show. Mr. Taats took the butterfly "flying about willows, February." Mr. D. Kannemeyer writes: "*Pelias* is very abundant at Montagu; it frequents the sides and summits of hills and mountains, its favourite resort being the "Wagen-Boom" (*Leucospermum conocarpum*), the only high bush growing there, and that but sparsely. It has all the Nymphalidean habits, and commonly shows a preference for some particular twig, generally a withered one. Found end of November and beginning of December." Mr. J. A. Bell found *Pelias* "common on dung" in Damarraland.

N. Jahlusa.—P. 177.—*Hab.* Highlands, near Graham's Town (Mrs. Barber); Bashee River (J. H. B.); Zambesi (Miss Gray).

Mr. Westwood has published a description of this beautiful insect under the name of *Charaxes Argynoides* (see Proc. Ent. Soc. Lond., 1864, p. 10.) Mr. Bowker found several specimens in Kaffraria, and notes the species as rare, and very local in its habits, keeping constantly to particular trees. "*Jahlusa* is the most aristocratic of the group. Both *Neanthes* and *Zoolina* are to be found amongst other butterflies, and even sitting upon a stone; but I never saw *Jahlusa* except upon one of his favourite trees, chasing away every intruder, and, beyond keeping his border clear, having nothing to do with the piebald set flying about him."—J. H. B.

N. Zoolina.—P. 178.—*Hab.* Bashee River (J. H. B.)

In the ♂ of this species (which has but one tail on each hindwing) the hindmarginal borders are much broader than in the ♀, especially in apical region of forewing, the spot and thin irregular streak being wholly merged in the border, which thus contains four or five additional spots of the ground-colour.

"Found on a large yellow-flowered Thistle near banks of Bashee; ♀ common, and easily captured; ♂ more reserved and seldom seen on the wing. The ♀ is often to be taken flying up and down a valley among scattered trees or bush, and at such times is easily mistaken for one of the common species of "Whites." Appears in autumn: not seen after beginning of April."—J. H. B.

N. Neanthes.—P. 179.—*Hab.* Bashee River (J. H. B.)

"Habits like those of *Jahlusa*; but sometimes visits the ground, and settles for a few minutes on grass or shrubs. December and January, 1862; April to August, 1863; most numerous in May."—J. H. B.

Philognoma Varans.—P. 181.—*Hab.* Bashee River (J. H. B.).

This species was not uncommon in the Botanic Garden, Port Natal, on the 33rd June, 1865. It seems to be very common in Kaffraria.

Cyllo Leda.—P. 186.—*Hab.* Botanic Garden, Port Natal (M. J. McKen), "Querimba."—Hpfr.

Leptoneura Cassus.—P. 195.—*Hab.* Murraysburg (J. J. Muskett).

This species has a wider range than I expected, Murraysburg being in the Eastern Province of the Colony.

Erebia Hyperbius.—P. 197.—*Hab.* Murraysburg (J. J. Muskett); Burghersdorp (D. Kannemeyer).

The specimens that I have received from the two localities named are smaller than usual, and in the Burghersdorp example there are two distinct ocelli on underside of hindwing, one near costa and the other between 2nd and 3rd median nervales.

E. Hippiæ.—P. 199.—*Hab.* Simon's Town.

E. Sabacus.—P. 200.—*Syn.* *Erebia Sabacus*, *Trimen*, *Tr. Ent. Soc. Lond.*, 3rd Ser., vol. ii, p. 176.

Early in October, 1864, I found Variety A of this species not uncommon on the hills behind Simon's Town.

E. Cassius.—P. 202.—*Hab.* Bashee River (J. H. B.).

Ypthima Hebe.—P. 205.—*Syn.*—*Cœnyra Hebe*, *Hewits.*, *Trans. Ent. Soc.*, 3rd Ser., vol. ii, p. 281, pl. 17, f. 1.

Mycalesis Evenus.—P. 207.—*Hab.* Botanic Garden, Port Natal.

Eurytela Hiarbas.—P. 212.—*Hab.* D'Urban, Port Natal.

This Butterfly was common throughout the wooded flat extending from the Point to the Town of D'Urban, when I landed there in June and August, 1865.

Hypanis Ilithyia.—P. 214.—*Hab.* D'Urban, Port Natal.

I took several examples of *Ilithyia* on the line of railway between the Point and D'Urban. The species is conspicuous on the wing from its warm colouring; it flies low, and not rapidly, often settling on the ground.

Loxura Alcides.—P. 219.—*Hab.* Highlands, near Graham's Town (Mrs. Barber.)

Iolaus Sidus.—P. 224.—*Syn.* *Iolaus Sidus*, *Trimen*, *Tr. Ent. Soc. Lond.*, 1864, 3rd Ser., vol. ii, p. 176.

I Bowkeri.—P. 225.—*Syn.* *Iolaus Bowkeri*, *Trimen*, *Tr. Ent. Soc. Lond.*, 1864, 3rd Ser., vol. ii, p. 176.

Amblypodia Erylus.—P. 228.—*Hab.* D'Urban, Port Natal (M. J. McKen); Sierra Leone.—Coll. Brit. Mus.

Sithon Batikeli.—P. 232.—*Hab.* Highlands, Graham's Town (Mrs. Barber); Damara Land (J. A. B.); "Madagascar"—Boisd.

Mrs. Barber notes this insect as occurring "amongst bushes in low situations."

Lycæna Bœtica.—P. 236.—

LARVA.—Bright-green; paler on the under surface. A dark-green dorsal line; beneath it, on each side, an indistinct line interrupted on each segment, followed by a row of short, oblique, indistinct streaks of the same dark-green, and a pale-green line just above the legs. Head small, shining, reddish-brown. Two-thirds of an inch in length. Feeds on flowers of *Crotalaria Capensis* (a Papilionaceous shrub) in which it lives.

PCPA.—Very pale greyish-ochreous, dusted unequally with blackish; the wing-covers more greenish in tint. A fuscous line down the back; some blackish spots on head and back; two rows of blackish spots on each side of back of abdomen. About half an inch in length: thickest and roundest in abdominal region: head blunt. The pupal state lasts from ten to twelve days in the summer.

L. Telicanus.—P. 238.—*Hab.* Mauritius.

I found this widely-distributed *Lycæna* very abundant in Mauritius in July, 1865. The specimens taken were both smaller and darker than the great majority of Cape examples.

L. Lingeus.—P. 239.—*Hab.* D'Urban, Port Natal.

I observed two specimens of *Lingeus* in the Botanic Garden near D'Urban.

L. Palemon.—P. 240.—*Hab.* Murraysburg (J. J. Muskett).

L. Hintza.—P. 243.—*Syn.* *Lycæna Hintza*, *Trimen, Tr. Ent. Soc. Lond.*, 1864, 3rd Ser., vol. ii, p. 177.

L. Thespis.—P. 246.—*Hab.* Highlands, Graham's Town (Mrs. Barber).

L. Knysna.—P. 255.

L. Lysimon.—P. 256.

I am still uncertain as to which of these two species is really *Lysimon*, but having found the insect which I have named *Knysna* abundantly in Mauritius (a known locality for *Lysimon*), while the other has not occurred there, I am inclined to believe that *Knysna* is *Lysimon*. Should this prove to be the case, my name of *Gaika* would stand for the species which I have referred to *Lysimon*.

Chrysophanus Orus.—P. 259.—*Hab.* Murraysburg (J. J. Muskett); Burghersdorp (D. Kannemeyer, Jr.)

C. Lara.—P. 260.—*Hab.* Murraysburg (J. J. Muskett).

Zeritis Zeuxo.—P. 262.—

Abundant early in October, 1864, at Wynberg, in a bushy spot at the side of the Simon's Town road.

Z. Chrysaor.—263.—*Syn.* *Zeritis Chrysaor*, *Trimen, Tr. Ent. Soc. Lond.*, 1864, 3rd Ser., vol. ii, p. 177.—*Hab.* Burghersdorp (D. Kannemeyer); Kowie River (J. Fry); Port Natal.

I took a single specimen of the ♂ on the Flat between D'Urban and the Barea, on June 23rd, 1865.

Z. Pyroeis.—P. 264.—*Syn.* *Zeritis Pyrocis*, *Trimen, Tr. Ent. Soc. Lond.*, 1864, 3rd Ser., vol. ii, p. 178.—*Hab.* Simon's Town.

Z. Thysbe.—P. 265.

Mr. Layard has taken the type-form of *Thysbe* not far from Cape Town, and Herr Gross has shown me an extraordinary variety or "sport" of the ♂ of that form, which he captured near Platteklip, on the ascent of Table Mountain. In the last-named specimen the blue suffusion is of unusual brilliancy and extent, completely obliterating all the orange of forewing as well as the spots, but leaving a very broad apical, and narrow hindmarginal black border, edged outwardly by the usual small orange lunules: while in the hindwing the blue extends to beyond middle, but leaves a broad orange border of even width along hindmargin: the markings of the undersurface, however, remain as usual, but are strongly defined. The forewings are acutely angulated, and the projections of hindwings unusually long.

The beauty of Herr Gross's specimen is most striking, far exceeding that of the most perfect of ordinary examples.

On the 7th August, 1865, I observed a specimen of the typical *Thysbe* close to Port Elizabeth.

Z. Phosphor.—P. 269.—*Syn.* Zeritis Phosphor, *Trimen, Tr. Ent. Soc. Lond.*, 1864, 3rd Ser., vol. ii, p. 178.

Z. Alphæus.—P. 270.—*Hab.* Highlands, near Graham's Town (Mrs. Barber).

Alphæus is noted by Mrs. Barber as "by no means common" at Highlands, and as inhabiting elevated spots on the mountains.

Z. Malagrida.—P. 271.—*Hab.* Highlands, near Graham's Town (Mrs. Barber); Murrayburg (J. J. Muskett); Burghersdorp (D. Kannemeyer, Jr.); Beaufort (E. L. Layard.)

The specimen of this variable species forwarded by Mrs. Barber was a ♀ rather paler than usual, with much greyish suffusion, and the underside markings thin and rather indistinct. Examples from Beaufort, Murraysburg, and Burghersdorp are very large, and brilliant in colouring: the orange of the upper side is bright and of wide extent, leaving a dark bordering of even breadth, edged with a very conspicuous black and white fringe; and the silvery spots of the underside are larger and more metallic than even in the Swellendam specimens.

Z. Pierus.—P. 274.—*Hab.* Murraysburg (J. J. Muskett); Burghersdorp (D. Kannemeyer, Jr.).

Z. Thero.—P. 276.—*Hab.* Kalk Bay.

Lucia (?) *Delegorguei*.—P. 280.—*Hab.* D'Urban, Port Natal.

I took a single ♀ specimen at the side of the Railway close to D'Urban Point, on 4th August, 1865. It flew slowly, close to the ground, upon which it soon settled. Early in 1865, Mr. Bowker forwarded some unusually large and well-marked examples of both sexes of this curious Butterfly from the River Tsomo, Kaffraria Proper, and gave me the following account of their habits:—"Very numerous at the Ohita,

Kreli's old kraal. The ♂s kept flying, often five or six together, about the tops of trees, darting and whirling round and round like a lot of flies; while the ♀s were quietly settled on the trees, feeding on the moisture from the bark or on the injured galls of the wild vine."

D'Urbania Amakosa.—P. 283.—*Hab.* Highlands, near Graham's Town (Mrs. Barber).

In Mrs. Barber's specimens, the orange band of *hindwings* is much suffused, and occupies often the entire disc, especially in the ♀. In the latter sex, also, the orange band of *forewings* is largely extended, merging on inner margin with a wide basal suffusion of the same colour.

Pentila Tropicalis.—P. 284.—*Hab.* D'Urban, Port Natal (M. J. McKen).

Pyrgus Asterodia.—P. 285.—*Syn.* *Pyrgus Asterodia*, Trimen, *Tr. Ent. Soc. Lond.*, 3rd Ser., vol. ii, p. 178.

I have received much-injured examples of a *Pyrgus* from Murraysburg and Burghersdorp, which appear to be referable to this species.

P. Sataspes.—P. 290.—*Syn.* *Pyrgus Sataspes*, Trimen, *Tr. Ent. Soc. Lond.*, 3rd Ser., vol. ii, p. 178.

P. Elma.—P. 291.—*Hab.* Kowie River (J. Fry).

Cyclopides Metis.—P. 293.—*Hab.* Genadendal (G. H.); Natal (W. Guenzius).

C. inornatus.—P. 295.—*Syn.* *Cyclopides inornatus*, Trimen, *Tr., Ent. Soc. Lond.*, 3rd Ser., vol. ii, p. 179.

Pamphila nireostriga.—P. 298.—*Syn.* *Pamphila? nireostriga*, Trimen, *Tr. Ent. Soc. Lond.*, 3rd Ser., vol. ii, p. 179.

P. Letterstedti.—P. 300.—*Hab.* Burghersdorp (D. Kanne Meyer); D'Urban, Port Natal.

I took both sexes at Natal, on the 3rd August, 1865.

P. Zeno.—P. 301.—*Hab.* Bangalore, Madras Presidency (R. G. Southey).

A ♀ specimen of this species, sent to me from India by Mr. Southey, of H. M. 10th Regt., is rather smaller than the South African examples, and has acuter forewings and more produced anal-angular lobes of hindwings: in the *forewing*, also, are two thin, oblique, parallel, yellow streaks, connecting the costal yellow irroration with the topmost spot of transverse row, and almost touching discal-cellular spot; while in *hindwing* the row of spots is straiter and narrower, commencing abruptly near costa, with the first spot obsolete, and the cellular spot is smaller, the longitudinal fold near inner-margin being marked by a yellow line. On the *underside*, the yellow is deeper in tint, and the blackish on lobe of anal angle of hindwing fainter.

A ♂ specimen forwarded by Mr. Bowker presents the same pattern and colouration as the ♀.

P. Erinnyis.—P. 303.—*Hab.* Highlands, near Graham's Town (Mrs. Barber).

P. Borbonica.—P. 303.—*Hab.* D'Urban, Port Natal.

I refer to this species a ♂ and a ♀ *Pamphila* which I took at Natal, in June and August, 1865, respectively. The ♂ has smaller spots than usual in *forewing*, the last being obsolete above and ill-defined on underside; while the olivaceous tint of *underside* is very faint, and the spots of hindwing minute. The ♀ has the first 3 spots of *forewing* more conspicuous than usual; while on the *underside* the yellow-olivaceous is wanting, being replaced by hoary-grey irrorations. The wings are blunter and more rounded than in the Mauritian examples.

Leucochitonea bicolor.—P. 307.—*Syn.* *Leucochitonea bicolor*, *Trimen*, *Tr. Ent. Soc. Lond.*, 3rd Ser., vol. ii, p. 180.

Caprona Canopus.—P. 309.—*Syn.* *Caprona Canopus*, *Trimen*, *Tr. Ent. Soc. Lond.*, 3rd Ser., vol. ii, p. 180.—*Hab.* D'Urban, Port Natal.

I captured a single specimen of this curious Hesperian in the Botanic Garden at D'Urban, on the 23rd June, 1865. I could not detect any noise emitted by it in flight. It settled twice on the purple labiate flowers of a weed common in the Garden, keeping its wings fully expanded.

Nisoniades Djælælæ.—P. 311.—*Hab.* Highlands, near Graham's Town (Mrs. Barber).

N. Kobela.—P. 312.—*Syn.* *Nisoniades Kobela*, *Trimen*, *Trans. Ent. Soc. Lond.*, 3rd Ser., vol. ii, p. 180.

N. Ophion.—P. 313.—*Hab.* D'Urban, Port Natal. "Sierra Leone" (Drury and Stoll).

This species is common in the Botanic Garden at Natal, and seems to prefer the vicinity of Mango trees. It is very rapid in flight, the white undersurface of hindwings being then conspicuous. It settles constantly, and very abruptly, on the under side of leaves, keeping the wings fully expanded. Several of the ♀ specimens that I captured are fully as large as Drury's figures.

Ismene Florestan.—P. 318.—*Hab.* Mauritius.

I observed several specimens of *Florestan* in Mauritius. The insect flies in a hurried, bustling fashion, more after the manner of a *Noctua* than of a butterfly. The hindwings are partly expanded when at rest.

CONCLUDING REMARKS.

It was my intention to have entered at length into the highly interesting question of the geographical distribution of the butterflies described in this work, both over Southern Africa and throughout the globe, but I have found the data that I have hitherto been able to collect, especially as regards the range of species over the African Continent, too scanty to admit of a proper discussion of the subject. The field is immense, and observers are very few and widely separated; but materials are surely though gradually accumulating, and there is every reason to hope that, in a few years' time, the facts at our disposal will render practicable a fairly accurate generalization.

The following Table must accordingly be regarded as a summary only of my present knowledge of the geographical range of the South African *Rhopalocera* already known. New species, as well as new localities (often most unexpected) of known forms, are constantly being discovered; and the importance of this ever-accumulating evidence, inappreciable as it may be at any given time, should never be lost sight of by those who endeavour to deduce from already-recorded facts the indications of general laws.

TABULAR VIEW of the GEOGRAPHICAL DISTRIBUTION

[illegible]

of the SOUTH AFRICAN BUTTERFLIES.

FAMILIES & GENERA.	Number of Species whose Range seems limited to										Total No. of S. African Species.	
	Extra-Tropical South Africa.	Africa, South of Equator.	Africa.	Africa and Europe.	Africa and Asia.	Africa, Asia, and Europe.	Africa, Asia, and Australia.	Africa, Asia, Aus- tralia, & America.	Africa, Asia, Europe, America.	Cosmopolitan	In each genus	In each family.
Eurytelidæ .....	..	..	2	..	1	..	..	..	..	..	..	3
Eurytela .....	..	..	2	..	..	..	..	..	..	..	2	..
Hypanis .....	..	..	..	..	1	..	..	..	..	..	1	..
Lycænidæ	32	5	7	1	4	3	..	..	..	..	..	52
Loxura	1	..	1	..	..	..	..	..	..	..	2	..
Myrina	1	..	..	..	..	..	..	..	..	..	1	..
Iolaus	3	..	..	..	..	..	..	..	..	..	3	..
Amblypodia	2	..	1	..	1	..	..	..	..	..	4	..
Sithon .....	..	1	..	..	..	..	..	..	..	..	1	..
Lycœna	11	2	4	1	3	3	..	..	..	..	24	..
Chrysophanus	2	..	..	..	..	..	..	..	..	..	2	..
Zeritis	11	1	..	..	..	..	..	..	..	..	12	..
Lucia .....	..	1	..	..	..	..	..	..	..	..	1	..
D'Urbania	1	..	..	..	..	..	..	..	..	..	1	..
Pentila .....	..	..	1	..	..	..	..	..	..	..	1	..
Hesperidæ	24	10	2	..	1	..	..	..	..	..	..	37
Pyrgus	4	..	1 ?	..	..	..	..	..	..	..	5	..
Cyclopides	5	1	..	..	..	..	..	..	..	..	6	..
Pamphila	7	4	..	..	1	..	..	..	..	..	12	..
Leucochitonea	1	1	..	..	..	..	..	..	..	..	2	..
Caprona	1	1	..	..	..	..	..	..	..	..	2	..
Nisoniades	5	2	..	..	..	..	..	..	..	..	7	..
Ismene	1	1	1	..	..	..	..	..	..	..	3	..
TOTAL	95	41	59	1	16	4	1	1	1	1	220	

It is interesting to observe, in the above Table, how large a proportion of the whole number of Rhopalocerous forms inhabiting Southern Africa appear to be peculiar to the region, 95 species, or nearly one-half, not being recorded to occur in any other part of the world, or even to extend into the tropical countries of Africa.

Widening the range so as to include, as far as known, Africa South of the Equator, the amount of peculiarity is increased by the addition of 41 species, making the whole number of endemic forms in the larger region 136, or about three-fifths of the South African species; while, if the whole of the African Continent is made the limit, a further addition of 59 species must be made, yielding a total of 195 (or all but nine-tenths of the entire number of Butterflies that have hitherto been found in Extra-Tropical South Africa) which are confined in their range to Africa alone.

This result speaks strongly for the dominant character of African forms, and the similarity of the conditions of life, throughout the continent, and tends to show how small has been the influx of immigrant species powerful enough successfully to contest the soil with the indigenes. All but one of the small proportion of South African species that are found in other continents are natives of Asia, the exception (if actually such) being a native of Europe. Seven only are European natives, three have been found in America, and but two have occurred in the Australian Continent.

It now only remains for me to express my grateful thanks for the very kind and valuable assistance so freely accorded me,—in many instances by those to whom I am personally unknown.

Nearly all the kind assistants of my labours named in the Preface to this volume have laid me under fresh obligations by renewed and continuous aid. Among these I have pleasure in specially mentioning Mr. C. J. Andersson, Mr. W. S. M. D'Urban, the Ven. H. Kitton (now Archdeacon of King William's Town), Mr. E. L. Layard, and Mr. L. Taats, all of whom have most liberally contributed to my stores of specimens and information.

But not to these friends only am I now indebted. Since the publication of the First Part of this work, I have been so fortunate as to find many other persons, chiefly residents in South Africa, not only willing but anxious to render every aid in their power to Entomology, and the majority of these I rejoice to number among my correspondents. How greatly the completeness of the Catalogue has been promoted by their means, or how encouraged in my work I have been by such cordial co-operation, it is needless to relate. Every

student of Natural Science is keenly alive to the value of aid such as this, for he knows that, isolated, he can accomplish little indeed.

To James Henry Bowker, Esq., Inspector of the Frontier Armed and Mounted Police, I am indebted for all the knowledge I possess regarding the Lepidoptera which inhabit Kaffraria Proper, that productive Coast region which extends from the River Kei to the Southern Frontier of Natal. Mr. Bowker's services to Botany are well-known, and his contributions to Entomology during the past four years have been no less important. In that period, he has collected, and transmitted to the South African Museum, several thousands of entomological specimens, mostly very well preserved, and has been in constant correspondence with me regarding them. His labours have been rewarded by the discovery of several species new to Science, and by the capture in abundance of many previously very rare in collections. But I need not further descant on services which are best borne witness to by this work itself, in the Second Part of which Mr. Bowker's name, usually accompanied by his interesting notes, occurs upon every other page.

Mrs. Barber, of Highlands, near Graham's Town, has supplied me with many species taken in her neighbourhood, together with graphic observations on their habits and earlier stages of being. This lady is an accomplished botanist, and, like her brother, Mr. Bowker, is gifted with observant powers of the highest order.

Another phytologist, M. J. McKen, Esq., Superintendent of the Botanic Gardens at Port Natal, has, during the past year, most assiduously cultivated entomology, supplying the South African Museum and my own collection with fine series of Natal insects, including many essentially tropical forms which do not appear to extend further to the South, and several species which I believe to be undescribed. Mr. McKen is now engaged on the observation and description of Lepidopterous larvæ and pupæ, a study that will assuredly throw much light upon our knowledge of the African species.

John A. Bell, Esq., of H. M. Customs, Port Elizabeth, upon his return from a journey through Damara Land to Lake Ngami, most liberally presented me with all the Lepidoptera (chiefly Butterflies) that he had collected in those little-explored regions. Mr. Bell, despite his lack of all entomological apparatus, collected specimens throughout the

route, placing them between sheets of paper or the leaves of books. As a means of verifying obscure and scarce species, these examples have been of great value.

To J. J. Muskett, Esq., M.R.C.S., of Murraysburg, I am indebted for many insects from that remote District of the Colony. The collections sent to me by this gentleman and Mrs. Muskett (formerly Miss Wentworth) include several species new to science, and have been of much service in ascertaining more thoroughly the geographical range of many forms.

My acquaintance with the Rhopalocera of Caledon is due to the kindness of John X. Merriman, Esq., who while surveying in that Division of the Colony, lost no opportunity of procuring and forwarding specimens.

Two Officers of H. M. 10th Regiment, Captain G. E. Bulger, and R. G. Southey, Esq., have rendered me constant assistance, not only during their stay at the Cape, but also since being stationed at Bangalore, in the Madras Presidency. A case of Mr. Southey's captures, lately received, has afforded me the welcome opportunity of comparing with South African specimens Indian examples of several species common to both regions.

I have received from H. J. Atherstone, Esq., of Highlands, near Graham's Town, many Butterflies of interest, not only from his immediate vicinity but also from the Coast of the Bathurst District. Mr. Atherstone has been most careful to note particulars of the localities and seasons of appearance, a knowledge of which adds so greatly to the value of specimens.

D. Kannemeyer, Jun., Esq., has favoured me with some excellent notes on the habits of Cape Butterflies, as well as with a few specimens collected at Burghersdorp, in the Albett District.

From John L. Fry, Esq., now at Port Elizabeth, I have received a number of Lepidoptera, one case of specimens from the mouth of the Kowie River being of peculiar interest.

I owe to W. F. Kirby, Esq., of the Entomological Society of London, the knowledge and subsequent possession of two Continental works* on African Lepidoptera which have proved of the utmost value to me, viz. : Hopffer's article on the Lepidoptera in Dr. Peters' "Naturwissenschaftliche Reise

* Quoted in this volume: "*Hypr., in Peters' Reise &c., Ins. p.—*", and *Wlgr., Lep. Rhop. Caffr., p.—*"

nach Mossambique: Zoologie, V. Insecten und Myriopoden;" and Wallengren's treatise in the "Kongliga Svenska Vetenskaps—Akademiens Handlingar" of 1857, entitled, "Insecta Rhopalocera in Terra Caffrorum annis 1838—1840 collecta a J. A. Wahlberg."

I have also to record my obligations to the numerous subscribers (headed by the Colonial Government), who, together with other most liberal contributors towards the expenses of publication, have enabled me to issue this work without pecuniary loss. To them, as well as to the public generally, is due a word of explanation as to the long delay which has taken place in the publication of the Second Part. This has been solely owing to unexpected difficulty in bringing about the completion of the *plates*, the descriptive portion of the Second Part having been in print more than two years ago. Vexatious as the delay has been in many respects, it has proved of benefit to the work by affording time for the collection of much fresh material and information, as may be gathered from the list of "Additional Species" and the copious "Additions and Corrections."

Most gratifying has it been to me, during the progress of this work, to note the increasing attention paid to Entomology both at home and abroad; and the thought that I have been instrumental in extending the cultivation of the Science in South Africa has increased the pleasure of what has on my part been truly a labour of love.

ROLAND TRIMEN.

Cape Town, February, 1866.

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TO THE

FAMILIES, GENERA, AND SPECIES.

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* [NOTE.] These figures having been made from damaged specimens, do not give the tails on submedian nervures of hind-wings.

† [NOTE.] Erroneously numbered 4 on Plate.

















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